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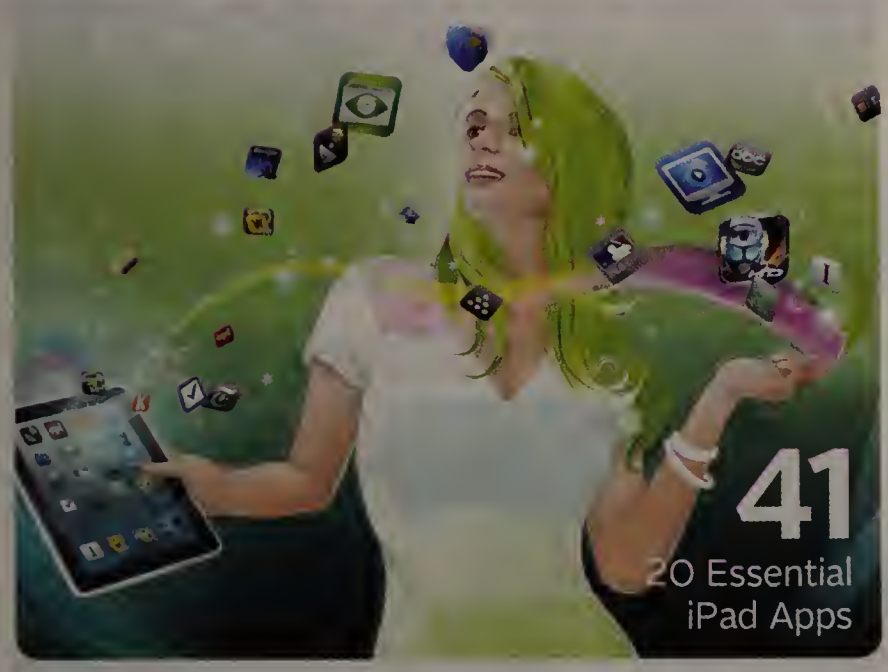

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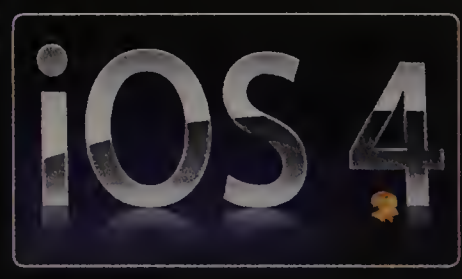

Podcast: WWDC Keynote Highlights
Fresh from Steve Jobs's keynote, our editors talk about all things iPhone (macworld.com/6205).

We also recommend:

Podcast: Steam for Mac, Essential iPad Apps (macworld.com/6202).

Slideshow: Macworld's Gift Guide for Grads (macworld.com/6203).

Slideshow: Eight Tips for Photographing Panoramas (macworld.com/6204).

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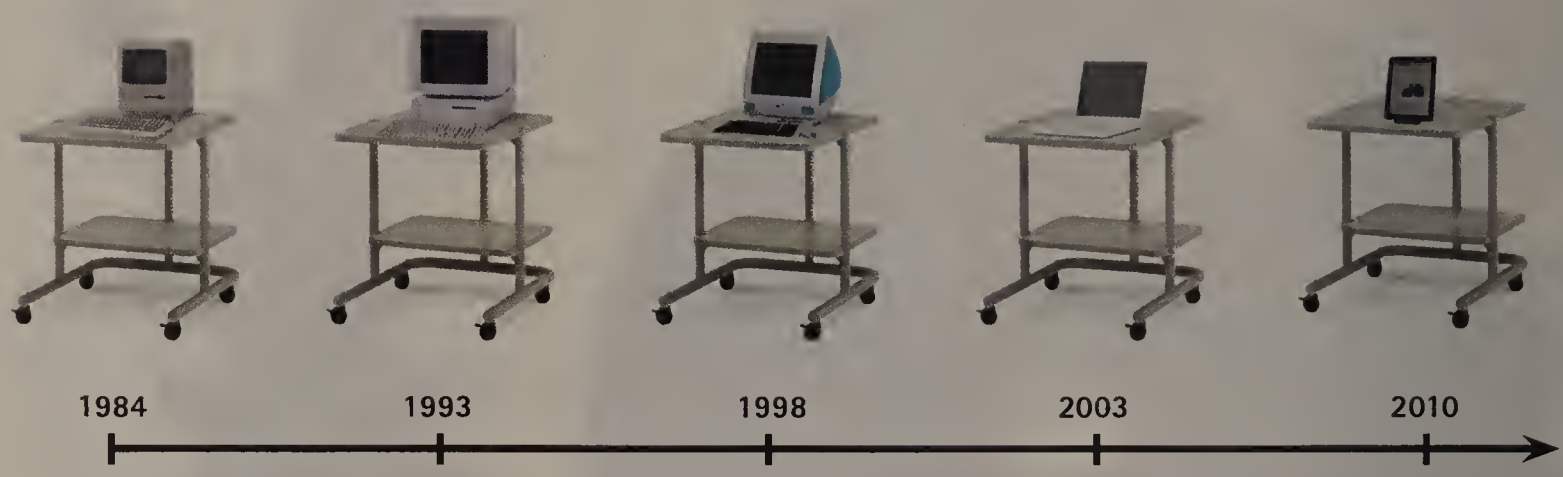

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 By Jason Snell

Bad Reputation

Should Apple care about consumers' (mis)perceptions?

These are interesting days for Apple. Its market cap is at an all-time high. More than 2 million iPads were sold in less than two months. Its reputation as a tech innovator has never been stronger, and its products have never been more popular.

Yet with that success has come a backlash. Apple's decisions about which apps get into the App Store continue to generate a stream of criticism. Adobe continues to complain about the exclusion of Flash from the iPhone and iPad. Google executives (missing the irony) savage Apple as a Big Brother–like force seeking to control an entire market.

Is this sniping just what comes naturally when your competitors realize they're eating your dust? Or is it something Apple should worry about?

Facts versus Perception

The other day I was showing my iPad to a colleague, a moderately informed tech consumer. He said that he had wanted to buy one but couldn't because he needed to be able to read PDF files—and since Apple supported only its own formats, the iPad wouldn't work for him. I assured him that the iPad could indeed read PDFs. He then asked about videos, music, and other files he hadn't purchased from Apple. I confirmed that the iPad could play those, too.

Apparently satisfied with my answers, he ended up ordering one soon after our conversation. But I can't help thinking that all the news stories about Apple's rejection of apps and Flash had something to do with his initial reluctance. And I don't think he's unique in this.

Perception isn't always based on reality. Sometimes it's based on misunderstanding and bad information. Which is why, despite the facts, consumer misperceptions about Apple could spread. And if they do, they could hurt the company's sales.

PHOTOGRAPH BY PETER BELANGER

If Apple's insistence on doing things its own way begins to taint its reputation, it needs to be wary.

Apple: Open the iPhone

It didn't help Apple's image problem when the *New York Times* published an editorial in June suggesting that the U.S. government should investigate Apple's policies to see if they violate antitrust laws. I'm not clear on how a company with a one-third smartphone market share, in second place behind Research In Motion, could be considered a monopoly, but OK.

Recently on Macworld.com I suggested that perhaps the time had come for Apple to find some way for third-party apps to be installed on the iPhone without going through the App Store approval process, just to quiet the critics and competitors.

Specifically, I suggested that Apple add a new feature, buried many menu items deep in the Settings app, that mirrors the one found on Android devices: an option that would let you install apps from unknown sources. If a user tried to turn this option on, they'd get a scary warning about how such sources couldn't be trusted, and that such apps could cause instability, crashes, data loss, and other alarming stuff. Few regular users would ever use such a setting. But it would be there, and it would let Apple move on.

To say that I got a lot of feedback on that story would be an understatement. Many people applauded my idea; many others suggested that it would be a terrible idea, because it would make the iOS unstable and unpleasant.

Does Anyone Care?

At his Worldwide Developers Conference keynote address in early June, Steve Jobs explained at length that the iOS actually offers two platforms for apps: native App Store apps (which must be approved by Apple) and HTML-based Web apps (which require no approval).

There's plenty to quibble about in that explanation, not least the fact that HTML-based Web apps aren't as powerful as native apps. But it tells me that Apple isn't about to open the App Store or provide an alternative to the App Store anytime soon.

iPhone sales are at record highs. iPads are selling at a rate of one every three seconds. It sure doesn't seem as if any vague, unspecified grumblings about Apple are having much impact yet. Maybe this discontent is a lot of sound and fury, signifying nothing.

I hope that's the case. But if Apple's insistence on doing things its own way begins to taint its reputation with consumers, it needs to be wary. Jobs's recent public explanations of why the App Store is curated are one sign that Apple knows it needs to educate the buying public. But it remains to be seen whether words will be enough, or whether the company will have to change its behavior to keep its good reputation intact.

E-mail me at jason_snell@macworld.com, or follow me on Twitter at twitter.com/jsnell.

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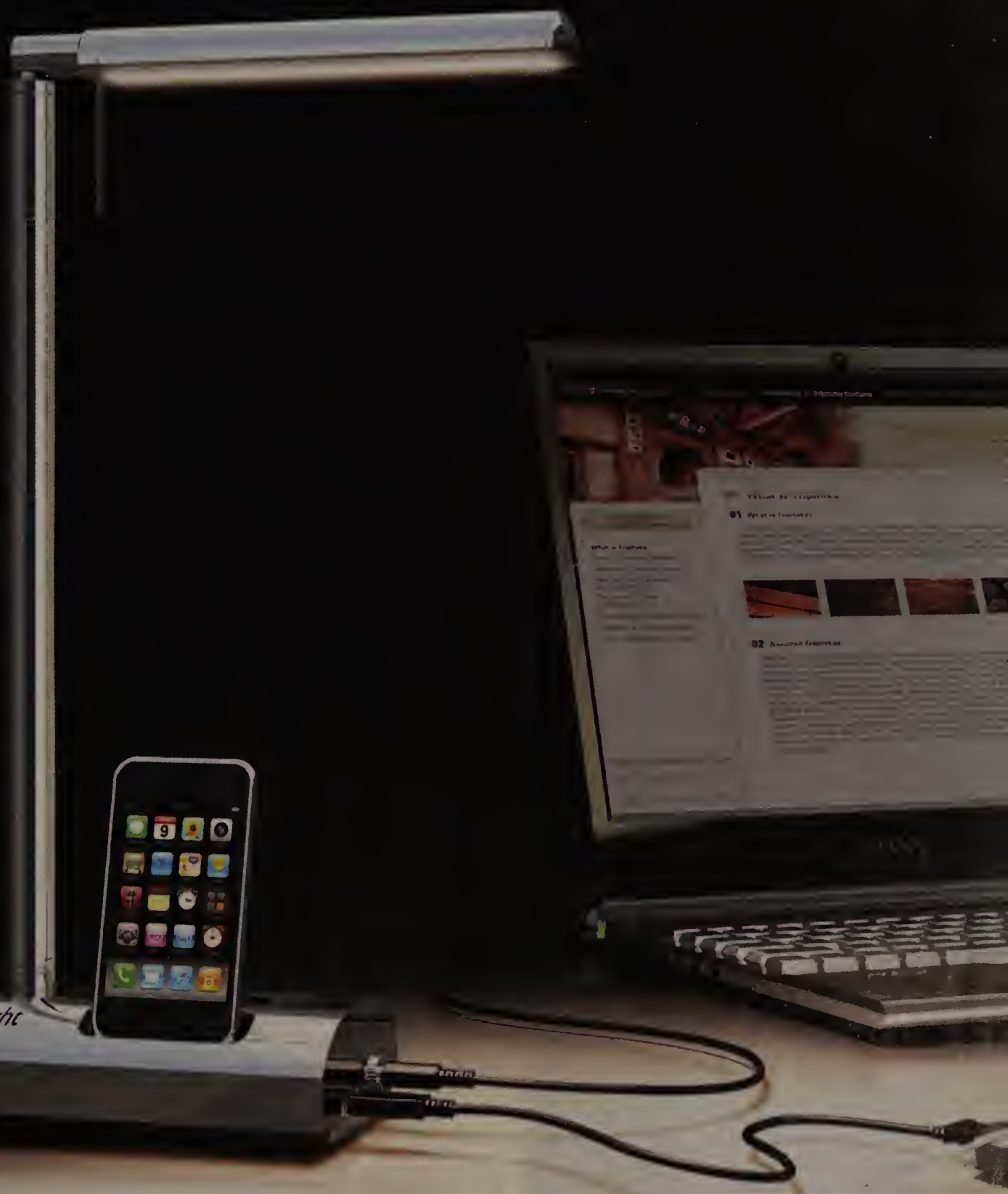

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MacBook Takes a Small Step Forward

Entry-level laptop features a new processor

BY JAMES GALBRAITH

REVIEW In May, Apple quietly updated its entry-level laptop, the MacBook. Available in just one standard configuration, the new MacBook now sports a faster processor and improved graphics that provide a modest speed improvement.

The new MacBook's appearance is identical to that of the mid-2009 model it replaces, featuring the same 13-inch glossy screen and white plastic unibody design. Also unchanged are the ports, with a Mini DisplayPort, two USB 2.0 ports, and a gigabit ethernet port; the new model has no FireWire ports.

Under the Hood

New to the MacBook is a 2.4GHz Intel Core 2 Duo chip, which takes the place of the 2.26GHz Intel Core 2 Duo used in the previous model (★★★★; macworld.com/5505). An nVidia GeForce GT 320M integrated graphics subsystem replaces the nVidia GeForce GT 9400M integrated graphics.

★★★★; $999; Apple, www.apple.com; full review, macworld.com/6207

Like the older system, the new MacBook ships with 2GB of RAM; Apple recommends 4GB as the maximum RAM configuration. The entire MacBook Pro line ships with 4GB of RAM standard, with a maximum configuration of 8GB. If you install 8GB of RAM in a MacBook, it will likely work just fine, but if something goes wrong, you'll be on your own. The included warranty and AppleCare extended warranty won't cover a MacBook with 8GB of RAM.

The only other notable upgrades are the addition of inertial scrolling on the trackpad (similar to the swiping gesture on an iPhone) and the Mini DisplayPort's new support for both audio and video out when you're using a compatible third-party adapter.

Apple offers a limited number of optional upgrades for the MacBook. Upping the RAM from 2GB to 4GB will cost $100, and swapping the 250GB, 5400-rpm hard drive for a 320GB drive of the same speed will cost $50; a 500GB drive adds $150 to the price.

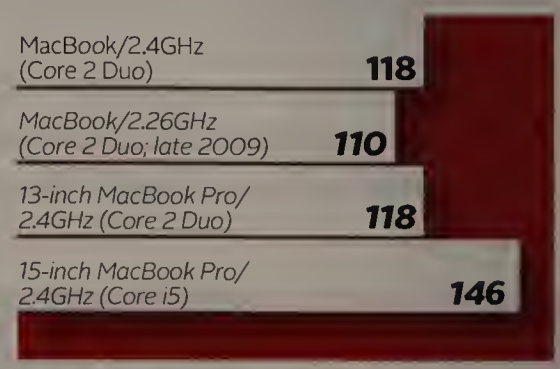
A Bit Faster

To find out how much these enhancements affect performance, we ran the new MacBook through our Speedmark 6 suite of system tests. We found that the new MacBook, with a Speedmark 6 score of 118, was 7 percent faster than the 2.26GHz MacBook it replaces.

By far, the biggest gain was in our 3D game tests, in which the new MacBook, with its nVidia GeForce GT 320M graphics, was able to display 66 percent more frames per second than the older model, with its nVidia GeForce GT 9400M graphics.

Macworld Lab Test

Speedmark 6 Test Results



Longer bars are better. Reference systems are in *italics*. For complete benchmark results for the MacBook, please visit macworld.com/6207. For complete benchmark results for the 13-inch MacBook Pros, please visit macworld.com/6125.—MACWORLD LAB TESTING BY JAMES GALBRAITH, CHRIS HOLT, LYNN LA, AND MEGHANN MYERS

MACBOOK PHOTOGRAPH COURTESY OF APPLE. MACBOOK PRO PHOTOGRAPH BY PETER BELANGER

Comparing the new $999 MacBook to the entry-level 13-inch 2.4GHz MacBook Pro (4 mice; macworld.com/6151), a $1199 Core 2 Duo system, we see identical Speedmark scores. With the same hard drives, processors, and integrated graphics, this should come as little surprise. And though the $1199 MacBook Pro, with 4GB of RAM, includes twice the memory of the MacBook, our Speedmark tests (run one at a time) show very little benefit from the additional RAM. I ran Speedmark on the 2.26GHz MacBook with 4GB of RAM for our recent review of the 13-inch MacBook Pros and found only a 2-point increase in Speedmark scores with the additional memory.

Looking at the performance differences between the MacBook and the low-end 15-inch MacBook Pro (4½ mice; macworld.com/6153), a $1799 model with 4GB of RAM, both integrated and discrete graphics, and a 2.4GHz Intel Core i5 processor, we see a much bigger gap—24 percent overall, according to Speedmark 6 results. The 15-inch MacBook Pro's discrete graphics subsystem displayed nearly twice the number of frames per second in the Call of Duty test as the new MacBook, which has only integrated graphics.

Battery Life

With the new graphics and some minor changes to the battery, the new MacBook can last longer between charging cycles. In our tests, where we loop a movie from the hard drive at full screen and full brightness, with AirPort connected to our local network and the volume on (but low), the new MacBook ran for nearly 5 hours, or 58 minutes longer than the model it replaces. It lasted 35 minutes longer than the 13-inch MacBook Pro and 22 minutes longer than the 15-inch MacBook Pro.

Macworld's Buying Advice

With its faster processor, improved graphics, and longer battery life, the MacBook makes an attractive option for budget-conscious laptop shoppers. Performancewise, the MacBook is no different than the 13-inch 2.4GHz Core 2 Duo MacBook Pro. The extra $200 for the MacBook Pro buys you more RAM, a FireWire 800 port, and an SD card slot.

17-Inch Pro Gets Updated

Supersized MacBook Pro is a viable desktop replacement

BY JAMES GALBRAITH

REVIEW The new $2299 17-inch MacBook Pro looks identical to the $2499 17-inch model that Apple released last year. But inside, a 2.53GHz Intel Core i5 replaces the 2.8GHz Intel Core 2 Duo used previously. Also, the nVidia GeForce GT 330M replaces the nVidia GeForce GT 9600M as the higher-powered discrete graphics option. Intel HD graphics are now used as the lower-powered integrated graphics option, replacing the nVidia GeForce 9400M.

To compare the performance of the new 17-inch model to that of the one it replaces, we used our Speedmark 6 benchmarking tool. The new MacBook Pro posted a Speedmark score of 154, nearly 12 percent faster than the 138 score of the older Core 2 Duo model.

The new 17-inch MacBook Pro shares nearly all of the same specifications of the $1999 15-inch MacBook Pro, right down to the 2.53GHz Core i5 processor in each laptop. It's no surprise, then, to see that the two models performed very similarly—the 15-inch model had a SpeedMark score of 150.

Changes to the graphics chips and subtle changes to the battery allow the new 17-inch MacBook Pro to last longer on a single charge than the previous 17-incher. When we tested the new 17-inch MacBook Pro, we found that it lasted about 8.5 percent longer than the system it replaces. Our battery test measures the amount of time the computer can operate while looping a movie, at full-screen and full brightness, using QuickTime while connected to a Wi-Fi network.

Macworld's Buying Advice

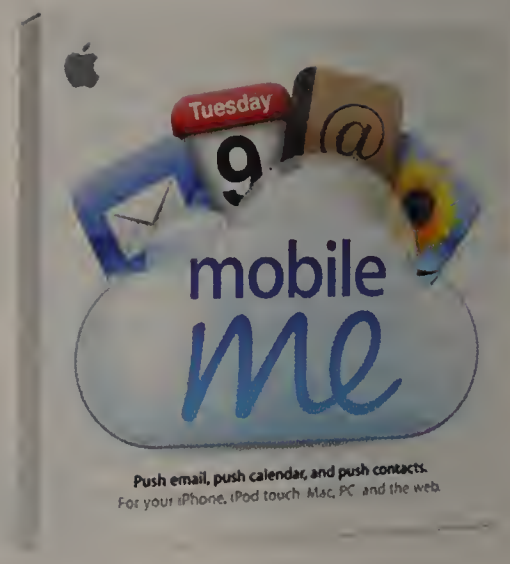
The new 17-inch MacBook Pro offers better performance, provides a little more battery life, and costs $200 less than the system it replaces. If you want a larger screen or require an ExpressCard/34 slot, the 17-inch model is the only member of the MacBook line to offer such features. For mobile Mac users who favor larger laptops, this configuration is a definite improvement on the previous 17-inch offering.

4 mice; $2299; Apple, www.apple.com; full review, macworld.com/6208

MobileMe's Mail Makeover

Webmail client takes cues from the iPad's Mail app

BY DAN MOREN



Apple unveiled a beta version of its revamped MobileMe Webmail interface that signifies a major shift in design. Instead of an interface based on Apple's Mail client for Mac OS X, the design is styled after the iPhone and iPad Mail apps.

The new menu-bar buttons use the same simple icons as the iPad version of Mail. A new Compact view looks similar to the landscape view of the iPad's Mail app: a message list resides in the left pane with a preview pane on the right. The Widescreen mode looks like the Compact mode with the addition of a column for your mailboxes and folders. The original Mac Mail-style view remains and is dubbed Classic.

One wholly new feature is the Archive button, which will automatically move selected messages into a new top-level Archive folder. Google's Gmail has sported this functionality for quite some time, and this is clearly a case of Apple playing catch-up to its competition. It ought to come in handy for people who take pride in keeping a neat and tidy inbox.

Composing messages has also gotten an overhaul, with the addition of a new formatting toolbar. A hyperlink tool lets you add inline hyperlinks, prompting you for link text and a URL.

One nicety that will help out in the composing window is the addition of a number of keyboard shortcuts: You can use the standard Mac key combos for bolding, italicizing, and underlining text or for saving, undoing, redoing, and even printing. But unfortunately, there are a couple of places where your muscle memory for the Mac version of Mail might get you into trouble. For example, Mail's shortcut for sending messages, ⌘-Shift-D, is already used in Safari for adding a bookmark to the Bookmarks menu, and ⌘-R will refresh the browser instead of replying.

Another new feature in MobileMe's Webmail client is the longed-for addition

of server-side filtering rules. Because these rules don't depend on any particular client, the actions get performed before the messages make it to the inbox on your Mac, iPhone, or iPad. So if you want to make sure that messages from a certain sender always get filtered into a particular folder, you won't have to depend on launching Mail on your Mac to make sure that happens.

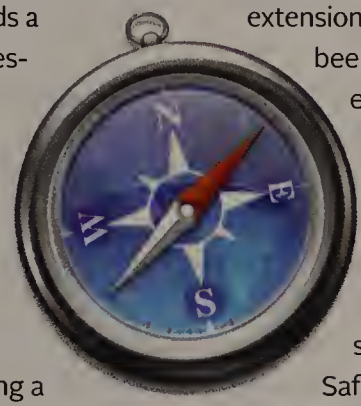
Apple also claims that it has overhauled the speed and performance of the new MobileMe Webmail, and it does seem snappier. You no longer have to page through your message list in chunks; you just scroll the list, and it loads the details as you go.

MobileMe so often seems like one of Apple's forgotten products that any movement or improvement is welcome. On the whole, the beta version of the Webmail client is promising, and, if nothing else, makes us eagerly anticipate similar enhancements to the rest of the MobileMe Web tools.

Safari 5 Adds Safari Reader, More

BY DAN MOREN

Amidst the iPhone 4 hoopla in June was the release of Safari 5, Apple's Web browser. The new version adds a Safari Reader feature that presents Web pages in a streamlined interface, more HTML5 capabilities, support for developer-created extensions, and performance enhancements.



The Safari Reader feature gives you the option of viewing a Web page in a slimmed-down, scrollable view, eliminating many distracting elements.

Apple also added the ability to ensure links always open in new tabs instead of windows, a smarter address field that remembers the content of the page as well as the URL, and the option of using Microsoft's Bing in the search field.

Apple has finally opened up Safari to extensions, a capability that had long been the domain of rival browsers. Apple has even added an Extension Builder to Safari to help in the development, packaging, and installation of extensions. To ensure security, extensions run in a sandboxed mode solely in Safari and require a digital certificate signed by Apple.

Safari 5 also features a number of performance enhancements, including the new Nitro JavaScript engine, which Apple claims improves JavaScript performance by 30 percent on Safari 4 and 3 percent on Google Chrome, as well as making it twice as fast as Firefox 3.6.

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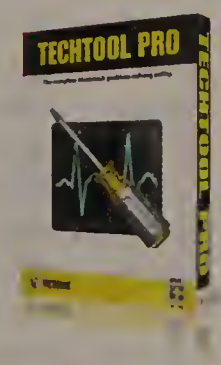

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Steam Brings Games to the Mac

Online service makes it easy for Mac gamers to try out and buy new games

BY DAVID CHARTIER

The arrival of Valve's online gaming service Steam (store.steampowered.com) for the Mac platform may well be a watershed moment for Mac gaming that's discussed for years to come.

Steam is essentially an iTunes Store for games. Over the years, Steam has become the go-to place for Windows gamers to shop for and try out everything from blockbuster releases to indie hits, find new friends to frag with, and stay up-to-date with the latest patches.

Fortunately, Steam for Mac isn't some duct-taped Java port that limps along with a fraction of its Windows counterpart's features. Valve used native Cocoa tools, even going so far as to re-engineer the Steam client and store on Windows to use Apple's WebKit rendering engine.

Steam for Mac is very much like the Windows version, so some elements certainly don't feel very Mac-like. If you've used Steam before, however, you'll feel right at home. As a long-time Windows gamer via Boot Camp, there was no learning curve for me.

Valve even brought its Steam Cloud feature to the Mac client. This is a useful service of the Steam APIs that allows developers to synchronize your game settings between each of the computers on which you install your games. If games are compatible with Steam Cloud, your settings will synchronize between the Mac and Windows versions.

When Steam was released for the Mac in May, Valve offered several Mac games, and the available library includes Portal, Team Fortress 2, Torchlight, Half-Life 2, Killing Floor, Football Manager 2010, City of Heroes: Architect Edition, and many others. Valve has promised that more (and more-recent) games like Left 4 Dead 2 will be available, and the upcoming Portal 2 sequel will arrive simultaneously on both the Mac and the PC this fall.

Steam for Mac is free, and Mac versions of PC games will cost the same as their counterparts. Valve has a new Steam Play license and badge in the store to denote games for which you can purchase one license and run the game on both Mac and Windows computers. If you have already purchased Portal, Team Fortress 2, Half Life 2, or Left 4 Dead 2 on a Windows PC, you won't have to spend another dime to play them on your Mac.

Macs: Current Lineup

PRODUCT	SPECS	RATING	PRICE	DISPLAY	SPEEDMARK 6 [A]	FIND CODE [B]
DESKTOP						
iMac	Intel Core 2 Duo/3.06GHz (nVidia graphics)	4	$1199	21.5 inches	148	5510
	Intel Core 2 Duo/3.06GHz (ATI graphics)	4	$1499	21.5 inches	164	5509
	Intel Core 2 Duo/3.06GHz	4	$1699	27 inches	162	5508
	Intel Core i5/2.66GHz	4½	$1999	27 inches	209	5511
Mac Mini	Intel Core 2 Duo/2.26GHz	4	$599	not included	104	5507
	Intel Core 2 Duo/2.53GHz	4	$799	not included	118	5506
Mac Pro	Intel Xeon/2.66GHz (4 cores)	4½	$2499	not included	206	4488
	Intel Xeon/2.26GHz (8 cores)	4	$3299	not included	203	4503
PORTABLE						
MacBook	Intel Core 2 Duo/2.4GHz (white)	4	$999	13 inches	118	6207
MacBook Air	Intel Core 2 Duo/1.86GHz	3½	$1499	13 inches	70	4953
	Intel Core 2 Duo/2.13GHz	3½	$1799	13 inches	72	4954
MacBook Pro	Intel Core 2 Duo/2.4GHz	4	$1199	13 inches	118	6151
	Intel Core 2 Duo/2.66GHz	3½	$1499	13 inches	126	6152
	Intel Core i5/2.4GHz	4½	$1799	15 inches	146	6153
	Intel Core i5/2.53GHz	4	$1999	15 inches	150	6154
	Intel Core i7/2.66GHz	4	$2299	15 inches	161	6155
	Intel Core i5/2.53GHz	4	$2299	17 inches	154	6208

[A] Speedmark 6 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.6 (Snow Leopard). For more information on Speedmark testing, go to macworld.com/5503. [B] In a browser's address field, typing in a find code after *macworld.com/* takes you to a product's review or overview.

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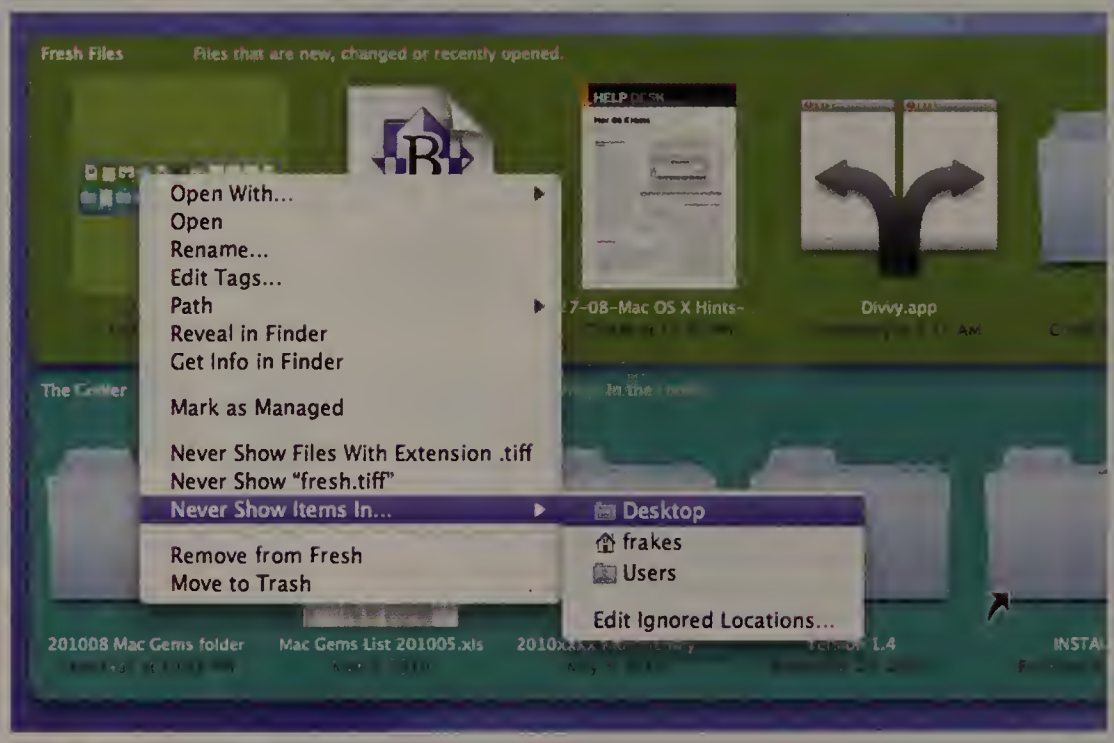
MAC GEMS

Discover Great, Low-Cost Mac Products **By Dan Frakes**



Fresh 1.2.1

UTILITIES Mac OS X's Apple menu provides a list of recently used documents, but in my experience most people don't take advantage of this feature, likely because it's tucked away, out of sight. Ironic Software's Fresh aims to make recent documents and folders more accessible and to let you do more with them.

Activate Fresh (by invoking a keyboard shortcut or by clicking the program's Dock icon), and two large green bars appear on screen. The top zone shows all new and recently used items: documents you've just edited, files you've just downloaded, folders you've just created, and so on. You can open an item by double-clicking it, but Fresh lets you do much more. For example, you can drag an item to move or copy it. Control-click (or right-click) an item, and you get options to rename it, reveal it in the Finder, get information about it, choose a program to open the item, and much more.

The bottom zone is an area for you to manually place items you want to keep handy; drag an item into this area, and it stays there until you purposely remove it. You can perform the same actions on these items as you can on recently used items. The number of visible items in each zone depends on the width of your screen—you use the arrow keys to access any additional off-screen items.

4½; $9; Ironic Software; macworld.com/6180

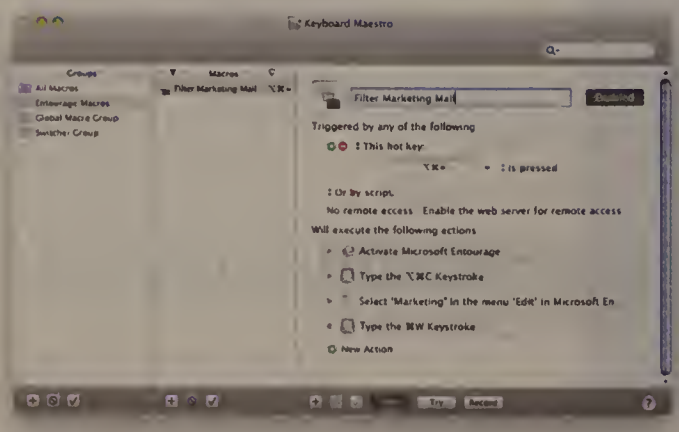
RipIt 1.4.3

VIDEO Since its debut, RipIt has been the easiest way to rip commercial DVDs you own to your hard drive—to create backup copies of kids' movies, for example, or to bring movies along when traveling. You just insert a DVD and click Rip to get a copy of the disc that you can play with Mac OS X's DVD Player application. RipIt has since seen a number of improvements, perhaps the most notable being a beta feature for converting a DVD to formats that you can play on your iPhone, Apple TV, and other devices.—**CHRISTOPHER BREEN**

4½; $20; The Little App Factory; macworld.com/6181

Go to Weblog

Read Mac Gems online (macworld.com/macgems) for longer reviews of these and other products.



Keyboard Maestro 4.2

PRODUCTIVITY Keyboard Maestro lets you automate repetitive tasks through *macros*. First you choose the particular macro action (what you want the macro to do) from one of Keyboard Maestro's groups, and then you choose the macro's trigger (the condition—such as a key press, timed event, or script—that initiates the actions). You can also create your own actions, including recording on-screen actions you want to be able to automate. Especially interesting is the capability to remotely trigger macros by using a free iPhone app.—**CHRISTOPHER BREEN**

4½; $35; Stairways Software; macworld.com/6119

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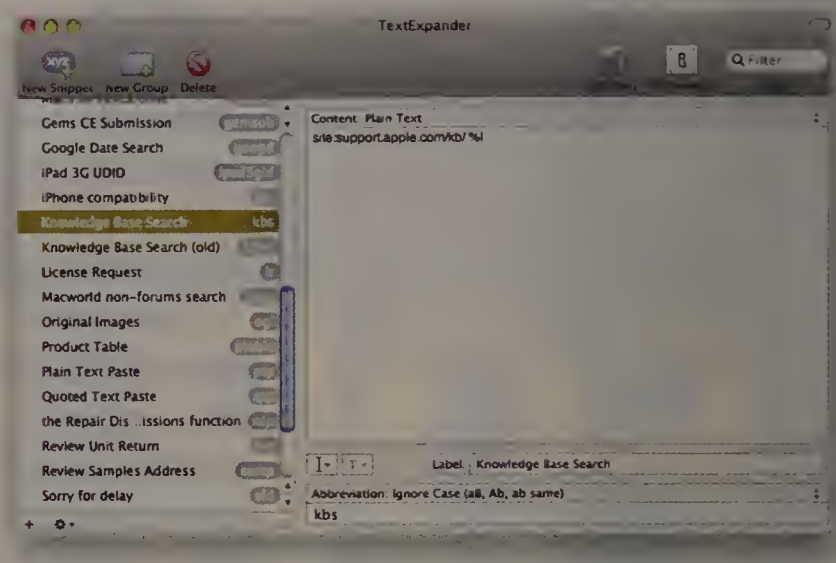
TextExpander 3.0

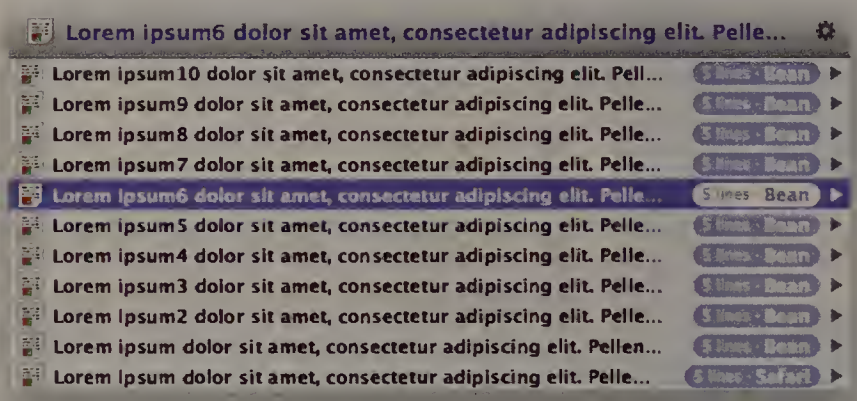


PRODUCTIVITY TextExpander makes repetitive typing easier by letting you assign abbreviations to blocks of frequently used text—URLs, addresses, HTML code, e-mail signatures, and more—and then inserting the appropriate snippet whenever you type one of those abbreviations. The program lets you organize your snippets into groups, and you can define, on a per-group basis, the way those snippets behave. For example, you can set a group to work with all applications or only in specific ones.

Also useful is the capability to automatically insert, for example, the current date or time, the contents of Mac OS X's clipboard, or other snippets within a snippet. You can also include keystrokes within snippets; for example, you can include the Tab key in a snippet containing your mailing address in order to automate entering the data into Web forms.

If you have more than one Mac, TextExpander can use MobileMe or Dropbox to automatically sync your TextExpander snippets between those computers. In addition, if you have the TextExpander app for the iPhone, you can sync TextExpander snippets with that device, too.

●●●●; $35; SmileOnMyMac; macworld.com/6123



LaunchBar 5.0.2

PRODUCTIVITY LaunchBar, a keyboard-driven application launcher and file finder, has long been a Mac Gems standout. Simply press a keyboard shortcut (⌘-Spacebar by default) and type a few letters of the name of the item you want to open, and LaunchBar instantly displays not only matches, but also intelligent guesses, letting you find, say, Microsoft Excel by typing *xl*; select the desired item to open it. LaunchBar learns from what you've done before, so after a few times, typing *xl* will select Excel by default.

But that's just the tip of what LaunchBar can do (see macworld.com/1010 and macworld.com/3545 for more info). The latest major version, LaunchBar 5, has added even more useful features. Topping that list is Clipboard history (shown here), which incorporates a multiple-Clipboard utility within LaunchBar. Whenever you copy or cut text, images, or the like, LaunchBar saves that content in its Clipboard history. You can summon the history list at any time to select one of those bits of past Clipboard content and paste it into the frontmost application.

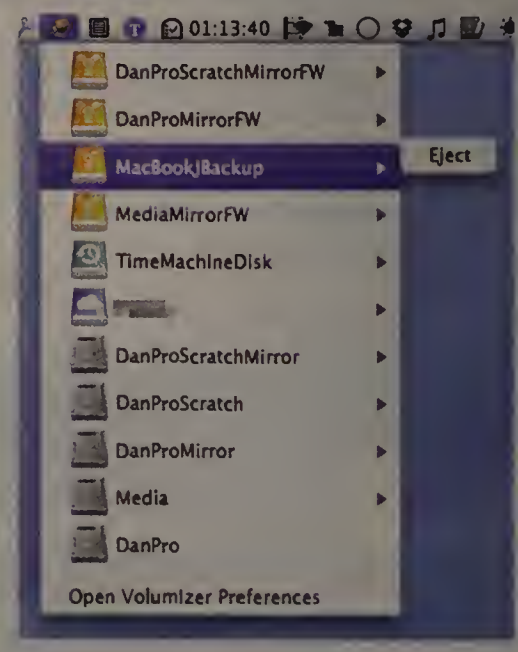
LaunchBar 5 also improves on the built-in calculator, lets you perform even more actions on files, provides Quick Look previews within the program itself, and adds quick access to Mac OS X services.—KIRK MCELHEARN

●●●●●; €24; Objective Development; macworld.com/6122

Volumizer 1.3.3

UTILITIES It's easy to eject mounted volumes—hard drives, disk images, thumb drives, CDs, DVDs, and mounted servers—from Finder-window sidebars or the desktop, but not everyone chooses to show all volumes in those locations. And if you have many windows open, or if you're working in another program, ejecting volumes can require you to switch to the Finder, use Exposé, or both. Volumizer provides a simple, systemwide menu listing all mounted volumes. Mouse over one of them and choose the Eject command that appears, and the volume is unmounted immediately. You can also quickly open a volume by choosing it from the menu.

If a physical drive has multiple volumes (partitions), choosing Eject for any one volume unmounts all of them immediately—you don't have to deal with the Finder's "Do you want to eject all volumes on this disk?" dialog box. You can't unmount the startup disk, but all other volumes are fair game. If you work with lots of drives and disk images, Volumizer is a handy solution to a minor, but frequent, inconvenience.



●●●½; payment requested; Greg Weston; macworld.com/6182

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Macworld HOT STUFF

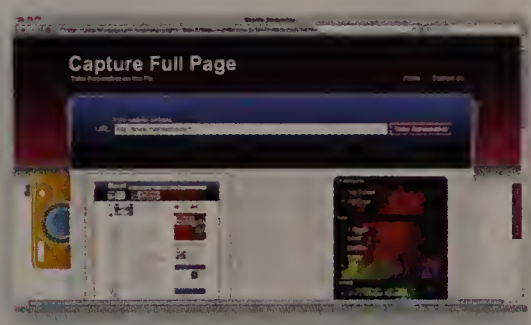
What We're Raving about This Month

Divvy

Divvy, a utility by Mizage, is the latest contender in a long line of window-organization software. From an icon in the menu bar, you can summon Divvy's main window, which displays a small pop-up window containing a grid of gray boxes—they represent your desktop space, separated into containers. Drag your mouse across the boxes, and the frontmost app will move and automatically resize to the space you drew. There's also a customizable keyboard shortcut system, and you can even define quadrants where you usually place your browser, iTunes, and e-mail windows, for example, with keyboard shortcuts for each space. Divvy can be especially helpful for those of you who have multiple monitors set up with your Mac, allowing you to arrange windows exactly as you want them on each display. The program requires Mac OS X 10.5 or later and costs $14. The Divvy Website has a screencast you can watch so you can see the software in action before you give it a try (mizage.com).—**DAVID CHARTIER**

EyeTV HD

Elgato's new $200 EyeTV HD is a video-capture device designed to let you watch and record SD and HD programs from cable or satellite sources on your Mac. The EyeTV HD connects to the component-video and analog-audio outputs on your decoder box or DVR, and, via USB, to your Mac. To enable you to control scheduling and recording with the included EyeTV 3 software, the package comes with an infrared channel changer that relays signals from the EyeTV software to your set-top box. A dual-format capture mode lets you record video in iPad and iPhone formats (www.elgato.com).—**JONATHAN SEFF**

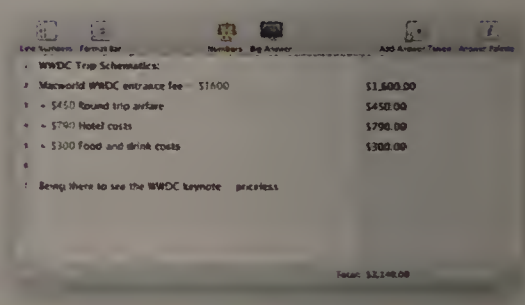


Capture Full Page

Ever need to snap a picture of an entire Web page? It's not easy. That's where Capture Full Page (free) comes in: Just load the site up in your browser, paste the link you want to snap into the URL field, and click Take Screenshot. Capture Full Page takes a picture of the whole page and saves it as a JPEG or PNG file in your choice of sizes, from extra small to full. A view of the image is then just a click away (capturefullpage.com).—**DAN MOREN**

Soulver 2

Acqualia's $25 Soulver 2 lets you write a math equation the way you'd articulate it in conversation. For example, instead of `$2.50 x 5`, you'd type `$2.50 for coffee times 5 days a week`. The 2.0 upgrade adds instant conversion, new percentage operations, answer tokens, stock support, and, for the programmers in the audience, support for calculations in hex and binary. The program requires a Mac running OS X 10.5.8 or later (acqualia.com).—**SERENITY CALDWELL**



MOSHI TERAGLOVE

Few things tarnish the image of a shiny MacBook or iPad more than a smudge-ridden display. Keep your display in pristine condition with the $16 Moshi TeraGlove. This reversible accessory features two different types of microfiber, one to remove grease and smudges, the other for cleaning dust and debris. The TeraGlove works with all types of displays and doesn't require any alcohol or solvents that could potentially damage the screen's antireflective coating. Simply wipe away to your heart's content, and every once in a while, toss the glove in your washer (www.moshistore.com).—**DAVID DAHLQUIST**

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Meet the iPhone 4

We spent some face time with Apple's latest phone—here's what we learned

BY DAN MOREN AND JASON SNELL

As Steve Jobs would have it, the newly unveiled iPhone 4 represents the biggest revision for the iPhone since the device's original 2007 release. After all, the iPhone 3G and 3GS had more in common than not: Save for a few details, the devices were almost exactly the same.

From that perspective, then, the iPhone 4 is certainly a radical departure. It's a brand-new device from the inside out, and when you get your hands on one, you'll be able to tell in an instant that this is a different beast from its predecessor.

Apple's latest phone will be on retail shelves by the time you read this—the 16GB model costs $199, while the 32GB version sells for $299. In case you haven't picked yours up yet, here are some impressions we had after spending a brief time with the iPhone 4 after its Worldwide Developers Conference (WWDC) unveiling in June.

The Look and Feel

Despite the new phone's outwardly different appearance, some things haven't changed. When you first heft the iPhone 4, you still get the sense that it's an extremely solid, well-built device. According to Apple's specs, the iPhone 4 is a tenth of an ounce heavier than its predecessor, the 3GS. But it's narrower and thinner—2.31 inches wide (to the 3GS's 2.4 inches) and .37 inch (compared to the 3GS's .48 inch)—so you get the impression of an incredibly dense device.

Both the back and front of the phone are now made of glass, coated with the same oleophobic layer used on the 3GS. Apple claims that the glass is 30 times stronger than plastic and rivals sapphire crystals in terms of strength. While we hesitated to throw the new iPhone to the floor and jump up and down on it, we can say that the 3GS's screen has proved to be extremely durable and, in many cases, more resistant to scratching than its plastic back; we expect the iPhone 4 to boast similar resiliency.

Apple's iPhone 4 is a brand-new device from the inside out, and once you get your hands on one, you'll be able to tell in an instant.

One side effect of making both the face and the back of the phone glass is that, at last, the differences between the white and black iPhone models now really mean something. In the iPhone 3G and 3GS, white and black models looked pretty much the same when viewed from the front. That's not true anymore: if you're using a white iPhone, you'll know it—it's white, front and back.

The Display

Apple calls the display on the iPhone 4 a Retina display, a slightly creepy name for an astounding piece of engineering. At 960 by 640 pixels, the iPhone 4 display is double the screen resolution of its predecessors. At 326 pixels per inch, the iPhone 4's display offers a level of legibility that you've come to

PHOTOGRAPH COURTESY OF APPLE

expect from the printed page, not a computer.

We placed an iPhone 3GS and an iPhone 4 side by side. The results were readily apparent. Text on the iPhone 3GS, while quite readable, showed noticeable pixelation. We couldn't pick out any pixels in the iPhone 4's text; as Apple claims, this screen really makes text look like something you'd find in a book or magazine, with none of the artifacts that we've come to expect from an LCD.

The screen uses the same in-plane switching (IPS) techniques used with the displays on all the iMacs and the iPad. As a result, the display is bright and colorful, with a massive viewing angle that really does look great, no matter which way you hold the device.

Cameras, Photos, Videos

The iPhone 4 sports two cameras. The rear one is a 5-megapixel model, up from 3 megapixels on the iPhone 3GS. The new camera also includes an LED flash. When you turn the flash on and press the shutter button, the LED flashes once to allow the camera to meter the brightness, and then a second time to take the picture.

The iPhone 4's front-facing camera, however, is no 5-megapixel wonder; it's a 640-by-480-pixel camera (three-tenths of a megapixel, if you're curious) designed to be used primarily with the new FaceTime video-chat system, though it will also work well as a way to take self-portraits. You can flip between the front and rear cameras from within the Camera app, as well as when you're using FaceTime.

FaceTime itself worked great in the demos Apple showed us. The video quality of the chats seemed somewhat variable; it's definitely not a high-def video experience, but it doesn't really need to be. (But as we learned from iChat AV, the real test with video chatting is when you try to start a chat under various and obscure network conditions.) Initiating a chat couldn't be easier, however. You call a friend who also has an iPhone 4 and, once they answer, tap the FaceTime icon in the Phone app to begin a video call. There's no app to launch and no buddy list to configure.

Once you're in a FaceTime conversation, you can readily switch between landscape and portrait orientations, or jump back and forth between the iPhone 4's front- and rear-facing cameras—in case you want to show your conversation partner what you're looking at. As in iChat on the Mac, there's a small window that shows what your camera is seeing, and you can drag that pane into any of the screen's corners.

The Software

We got to spend a few minutes using apps announced at WWDC: iMovie (macworld.com/6253) and the updated iBooks e-reader app (macworld.com/6254), which now runs on the iPhone in addition to the iPad. Given just how much processing power is required to edit video, iMovie's performance was impressive. The editing process felt very smooth. And the iMovie interface seems, if anything, *more* suited for the iPhone's touch interface than for the Mac's interface. Trimming a clip is as simple as tapping on it and dragging a pin right or left.

iBooks on the iPhone 4 takes great advantage of the new phone's high-resolution screen. Text is amazingly crisp. When we tried to flip over into PDF view, we did notice that there were some pauses when zooming in within a large PDF document. But once the zoomed-in portions of the PDF appeared, they were immaculately rendered.

First Impressions

The new iPhone impressed us during our limited time with the device. We look forward to more-extended time with it, particularly now that the newly updated—and renamed—iOS 4 has been released. Only then will we be able to say definitively if the iPhone 4 is the great leap forward that Apple claims it is.

iPads and iPhones: Current Lineup

PRODUCT	SPECS	RATING	PRICE[A]	DISPLAY	PERFORMANCE	FIND CODE[B]
iPad	16GB	Wi-Fi, 4½; 3G, 4½	Wi-Fi, $499; 3G, $629	9.7-inch color	Up to 10 hours on Wi-Fi; up to 9 hours on 3G	6000 Wi-Fi 6001 3G
	32GB	Wi-Fi, 4½; 3G, 4½	Wi-Fi, $599; 3G, $729	9.7-inch color	Up to 10 hours on Wi-Fi; up to 9 hours on 3G	6002 Wi-Fi 6003 3G
	64GB	Wi-Fi, 4½; 3G, 4½	Wi-Fi, $699; 3G, $829	9.7-inch color	Up to 10 hours on Wi-Fi; up to 9 hours on 3G	6004 Wi-Fi 6005 3G
iPhone 3GS and 4	8GB (3GS)	not yet rated	$99	3.5-inch color	9 hours of Wi-Fi Internet; 5 hours of 3G talk time	6255
	16GB (4)	not yet rated	$199	3.5-inch color (Retina)	10 hours of Wi-Fi Internet; 7 hours of 3G talk time	6256
	32GB (4)	not yet rated	$299	3.5-inch color (Retina)	10 hours of Wi-Fi Internet; 7 hours of 3G talk time	6257
iPod Touch	8GB	4½	$199	3.5-inch color	30 hours of music playback; 6 hours of video playback	3864
	32GB	4½	$299	3.5-inch color	30 hours of music playback; 6 hours of video playback	5257
	64GB	4½	$399	3.5-inch color	30 hours of music playback; 6 hours of video playback	5258

[A] All prices are Apple's prices. [B] In a browser's address field, typing in a find code after *macworld.com/* takes you to a product's review or overview.

Apple and AT&T: Partners through '12—or Beyond?

BY DAN MOREN

Though we've been hearing about the exclusive deal between Apple and AT&T since the latter was still called Cingular, the exact terms of that deal have long been shrouded in mystery. Now, a court filing from 2008 gives us another data point, even if it does little to shed light on where the partnership currently stands.

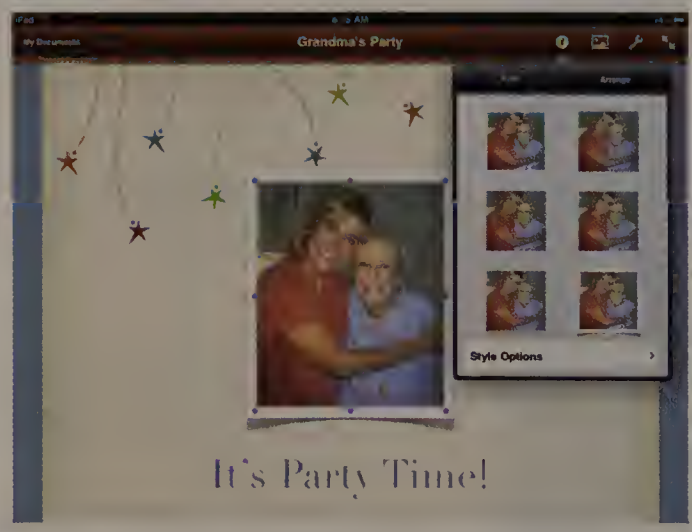
An Engadget blog post (macworld.com/6183) went over some recently released documents in a 2007 class action suit that alleges AT&T and Apple hold a monopoly on iPhone service by locking customers into a multiyear deal that extends beyond the two-year contract customers had to sign (by virtue of the fact that no other network offers the iPhone). In arguing against this claim, Apple filed a brief in October 2008 stating that there was absolutely nothing secretive about the exclusivity deal, and citing a 2007 *USA Today* article that said "AT&T has exclusive U.S. distribution rights for five years—an eternity in the go-go cellphone world."

That *USA Today* article is itself the source of most, if not all, allegations of the contract's five-year term; neither Apple nor AT&T has ever spoken on the record about the length of the deal. Further confusion stems from the fact that multiple sources later began referring to the iPhone deal as expiring in 2010—including Leslie Cauley, the very same *USA Today* writer who penned the 2007 article. So, as you can see, everything's as clear as mud.

Our best guess? Apple and AT&T have renegotiated the contract after that first deal—and it's pretty clear the two have renegotiated at least once.

iWork's iPad Editions Get Updates

BY DAVID CHARTIER



Portable purveyors of productivity, rejoice—Apple has updated the iPad versions of its iWork office applications. The updates add new features, fix bugs, and introduce support for new languages.

Pages 1.1 (macworld.com/6129) adds a toolbar and ruler to the landscape view. Documents now automatically fit to a page's width in landscape view, and Apple enhanced the Arrange panel's Back/Front slider. The update improves importing and exporting from Microsoft Word and fixes a scrolling problem that occurs after you insert and play a movie.

Numbers and Keynote, too, get an enhanced Back/Front slider in the Arrange panel in their 1.1 updates. The updated Numbers (macworld.com/6130) also improves the importing of Numbers '09 documents, while fixing issues with chart font size and table pasting, updating formulas when dragging and dropping cells, and applying new styles to tables. Keynote 1.1 (macworld.com/6131) adds an option to show additional alignment guides at smaller intervals and includes fixes for importing Keynote '09 and Microsoft PowerPoint presentations.

What's New at the App Store

Slacker Radio Adds Offline Playback

Slacker Radio (macworld.com/6184) has been updated to version 2.0; the streaming Internet radio app can now cache up to 25 stations for offline listening. That not only allows you to listen to the radio when you don't have a network connection, but also helps your iPhone's battery last longer, as streaming over 3G or Wi-Fi uses more power compared to playing a file stored on the device.—DAVID DAHLQUIST

Appigo Delivers Todo for iPad

Appigo has brought its to-do app to Apple's latest device. Todo for iPad (macworld.com/6185) takes advantage of the device's increased screen real estate, with a simple interface based on a paper binder theme. But the app goes beyond what you can do with pen and paper—the $5 Todo supports syncing with iCal and Microsoft Outlook and features push notifications for reminders.—MARCO TABINI

LotusLive Meetings Go Mobile

Users of LotusLive Meetings can now participate in online meetings on the go with a free mobile app called LotusLive Mobile Meetings (macworld.com/6186).

iPhone users can join a LotusLive Webcast and share files over either 3G or Wi-Fi networks, listening to the audio for the meeting while viewing meeting content. They can also see live shared desktop content like presentations and documents. Users must be authorized to access LotusLive Engage, a set of collaboration services that costs $8 per user per month.—NANCY GOHRING

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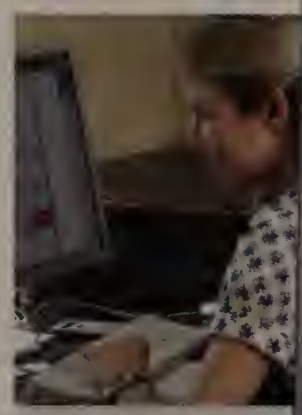

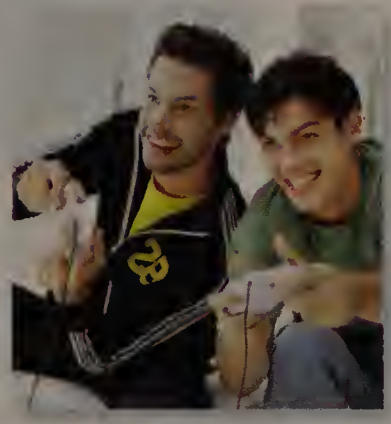
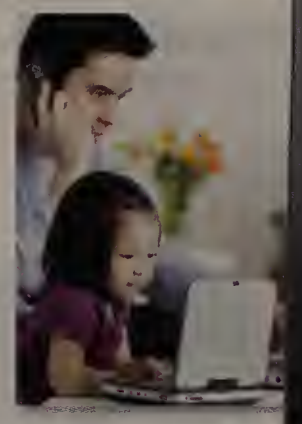

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APP GUIDE

iPhone, iPod Touch, and iPad Software That's Caught Our Eye

iPAD

Pinball HD 1.3

GAMES This iPad game captures the spirit of pinball almost perfectly by providing three action-packed 3D playfields. All the game's details feel right, from the intuitive controls to a physics engine that reproduces the feel of a pinball machine. Pinball purists will appreciate the fact that the game doesn't get the jitters when you hug the ball against a flipper. And an optional fly-by mode gives you an exciting view of the game in action.—MARCO TABINI

★★★★½; $3; OOO Gameprom; macworld.com/6171

iPHONE/iPAD

ePrint 3.4

UTILITIES Printing from a mobile device can be challenging, but this app gives you an elegant option for outputting to printers on a local network. ePrint does a superb job of printing readable Web pages, and, in a nice touch, saves your history in its built-in browser—handy if you've forgotten to bookmark a page you want to print. In addition, ePrint can pull photos stored on your mobile device, notes you've composed from within the app, or a list of selected contacts and use them to print cards and calendar pages.—JEFF MERRON

★★★★; $3; Microtech; macworld.com/6172

iPAD

WeatherBug Elite for iPad 1.0.1

REFERENCE While this weather tracker provides fewer features than some rival iPad apps, in this case, less is more. A local area map that takes up most of the screen is where WeatherBug really shines. You can choose from many map overlays, including radar and satellite views, as well as temperature and humidity observations. The app is very responsive, and pop-up widgets provide current conditions, forecasts, alerts, and video. Other weather apps may offer more, but few are as useful as WeatherBug Elite.—JEFF MERRON

★★★★; free; WeatherBug; macworld.com/6169

APP GEMS

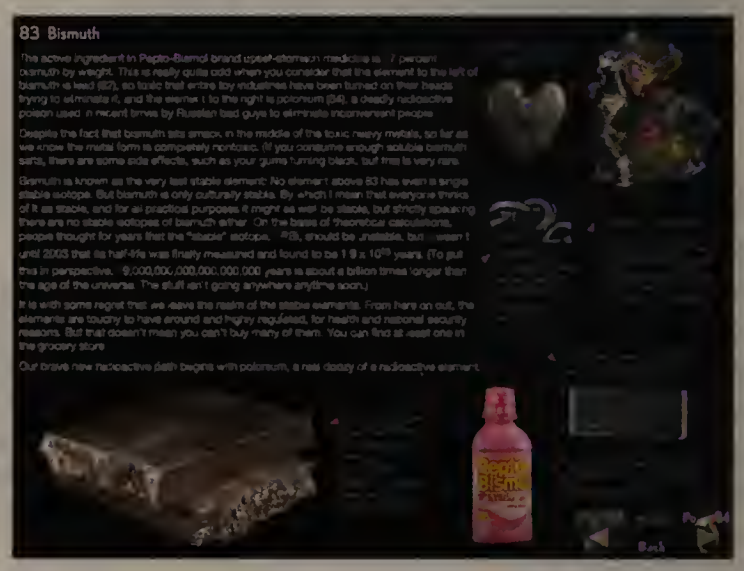
Tower Defense Games

Fieldrunners ★★★★½
This iPhone mainstay holds its position at the top of the tower-defense hill (macworld.com/4268).

geoDefense ★★★★½
macworld.com/6177

Archmage Defense ★★★★
macworld.com/6178

Find more games for your mobile device at macworld.com/6179.



iPAD

The Elements 1.0.2.1

REFERENCE Whether you are a chemistry whiz or you can't tell antimony from argon, this app brings the elements to life. A home screen displays a periodic table filled with miniature movies; tap on one, and the movie fills the screen, adding some basic facts about the element's physical properties. If you're connected to the Internet, you can learn more about the element's crystal structure and other characteristics through the Wolfram Alpha search engine.—FRANKLIN N. TESSLER

★★★★½; $14; Element Collection; macworld.com/6173

iPHONE

UrbanCompass 1.3

LIFESTYLE An elegant navigation app for the iPhone 3GS, UrbanCompass does a good job of finding nearby businesses and guiding you to them. Search for restaurants in your area, say, and UrbanCompass will show a series of pinpoints on a map; tap on one, and the app presents a compass that will point you toward your destination while telling you how far you have to go. The hybrid map/compass view is particularly handy for guiding you from point A to point B. UrbanCompass isn't ideal for drivers, but for the times you're on foot in a metropolitan area, its guidance will serve you well.—LEX FRIEDMAN

★★★★; free; The Good Life; macworld.com/6170

iPHONE/iPAD

Spark Radio 1.07

MUSIC Spark Radio lets you connect to your favorite stations while giving you tools to discover interesting radio. A Local Stations group finds a selection of stations based on your area. Once you've selected a station, Spark Radio displays links to stations offering similar content. The app also features an iTunes-like visualizer and a community feature that shows you what other users are listening to. An integrated Web browser lets you surf and listen at the same time.—JEFFERY BATTERSBY

★★★½; $2; Handcast Media Labs; macworld.com/6174

ESSENTIAL APPS

Hit the Road

On your summer road trip, make sure these apps are along for the ride (macworld.com/6176).

Postman ★★★★½ Turn those vacation photos into postcards you can send from your iPhone.

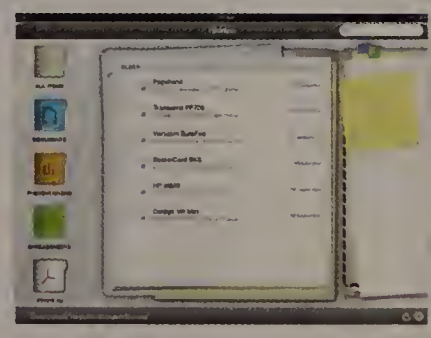
Navigon MobileNavigator North America ★★★★ Stay on course with the help of this GPS-based navigational tool.

PlaceTagger ★★★★ This geotagging app won't let you forget where you took a photo.

Trip Journal ★★★★ Capture important events and places on your journey.

iPAD

Memeo Connect Reader 1.1.0



PRODUCTIVITY For regular readers of Google Docs, this app offers a handy way to read those documents on your iPad, with a more pleasing interface than you'd get from Google Mobile App's simple Docs interface. Connect Reader uses folders to organize your documents, making it easy to find things with a tap. You can view your Google Docs files without an Internet connection, a very helpful feature for times when you're without Internet access.

—ROMAN LOYOLA

★★★★; free; Memeo; macworld.com/6175

More Reviews

See more iPhone, iPad, and iPod touch apps we've tested at iPhone Central (macworld.com/4164).

APPLICATION	DESCRIPTION	PRICE	RATING	FIND CODE*
Dr. Seuss's ABC Oceanhouse Media	children's e-book	$3	★★★★½	6164
Fluent News Reader 1.7 Fluent Mobile	iPad/iPhone news reader	free	★★★★	6165
Glee 1.0.4 Smule	karaoke app	$1	★★★½	6166
MusicID with Lyrics 1.1.2 Gravity Mobile	song identifier	$1	★★★★	6167
This American Life 1.0.2 Public Radio Exchange	radio show app	$3	★★★★★	6168

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App Guide

Get more reviews, including reader reviews, as well as listings for every iPhone app at AppGuide.com.

Speed Up Your MAC

4 EASY WAYS TO GIVE YOUR COMPUTER A BOOST

Nobody likes to wait. Waiting for your Mac to complete a task is especially galling. Whether you're applying a complex special effect in Adobe Photoshop, loading a particularly elaborate Website, or simply waiting for the thing to boot, if your Mac slows down or becomes unresponsive, it can produce the computer equivalent of road rage.

But you don't have to sit around tapping your fingers (or beating your fists); you can speed up your Mac. Four of the best ways to do that are adding more RAM (one of the easiest, yet most effective, of all upgrades); installing a new solid-state hard drive; reducing interference on your Wi-Fi network; and knowing what to do when the spinning beach ball pops up to tell you that your Mac has run out of computing resources. All four can make your Mac faster, and you calmer. So what are you waiting for?

ILLUSTRATION BY MATT VINCENT

Upgrade Your RAM

The complete guide to adding more memory

BY KYLE WIENS

If you're running the latest, memory-hungriest applications, your once-blistering Mac may be feeling a bit sluggish. But there's a simple way to fix that problem: Add more RAM. It's the easiest and least expensive way to speed up your Mac. With most systems, you can dive into the project and come out unscathed in less than ten minutes, provided you're handy with a screwdriver.

To get an idea of just how easy it is, find your model in the text (not the table) that follows on the next page. There, you'll find a difficulty rating for each upgrade and a brief description of how to install the RAM. Then look up your Mac model in the appropriate table to find out which kind of RAM it uses and how much it can accommodate. Note that Apple's official maximum RAM specifications aren't always realistic; that's why we've also included each model's actual max.

In the tables, you'll find a link to iFixit's guide for replacing your Mac's RAM. (If there isn't a link, there isn't a guide yet.) If you're not sure which Mac model you have, see iFixit's Mac identification system (macworld.com/6214) to find the model or EMC (macworld.com/6215) number. (An EMC number, if available, can help identify a model more precisely; it's usually printed on the outside of a Mac).

Note that the Mac Pro isn't part of the iFixit identification system, but you can download Crucial's scanner tool (macworld.com/6216) to find out what kind of RAM your Mac Pro—or any other Mac—uses.

MAC RAM UPGRADES: **LAPTOPS**

Computer Model	RAM Type	Memory Speed	Max RAM (according to Apple)/Max RAM (actual)	Find Code to RAM Replacement Guide
MacBook Pro				
13-inch MacBook Pro/unibody	PC3-8500	1066MHz	8GB/8GB	6241
15-inch MacBook Pro/unibody (late 2008, early 2009)	PC3-8500	1066MHz	4GB/8GB	6242
15-inch MacBook Pro/unibody 2.53 GHz (mid-2009)	PC3-8500	1066MHz	8GB/8GB	6243
15-inch MacBook Pro/unibody (mid-2009)	PC3-8500	1066MHz	8GB/8GB	6244
15-inch MacBook Pro/unibody (mid-2010)	PC3-8500	1066MHz	8GB/8GB	no guide
17-inch MacBook Pro/unibody	PC3-8500	1066MHz	8GB/8GB	no guide
15-inch MacBook Pro (model A1150)	PC2-5300	667MHz	2GB/2GB	6245
15-inch MacBook Pro/Core 2 Duo (model A1211)	PC2-5300	667MHz	3GB/3GB	6246
15-inch MacBook Pro/Core 2 Duo (models A1226 and A1260)	PC2-5300	667MHz	4GB/6GB	6247
17-inch MacBook Pro (models A1151, A1212, and A1229)	PC2-5300	667MHz	2GB/2GB (A1151), 3GB/3GB (A1212), 4GB/4GB (A1229)	6248
MacBook				
MacBook/aluminum unibody (model A1278)	PC3-8500	1066MHz	4GB/6GB	6249
MacBook/white unibody (model A1342)	PC3-8500	1066MHz	4GB/8GB	6250
MacBook/Core Duo	PC2-5300	667MHz	2GB/2GB	6251
MacBook/Core 2 Duo	PC2-5300, PC2-6400 (mid-2009), PC3-8500 (late 2009)	667MHz	2GB/3GB (late 2006, mid-2007), 4GB/6GB (others)	6252
MacBook Air				
MacBook Air	PC2-5300/ PC3-8500	667/ 1066MHz	2GB/same	no guide

*To get to a RAM Replacement Guide, type the find code after *macworld.com/* in your browser's address field. For example, macworld.com/6241 brings you to the RAM Replacement Guide for the 13-inch MacBook Pro/unibody.

G5 iMac

RATING EASY Once you loosen three screws, the rear panel lifts off, giving you direct access to the RAM. Replacing it is very simple and straightforward.

Intel iMac

RATING EASY Remove either one or three screws, take off the access door, and either flip a lever or pull a tab to remove the old RAM.

Mac Mini

RATING MODERATE Opening the Mac mini is the trickiest part. You must insert a sharpened putty knife (you can buy one from iFixit or sharpen one yourself) between the upper and lower cases to separate them. Once you open the case, you remove the internal frame to get at the RAM.

Mac Pro

RATING EASY Remove the side cover and slide out the memory riser cards (earlier generations) or the processor tray (early 2009 models) to gain access to the RAM modules. Depending on your model, you may need to install RAM in matched pairs and in a certain configuration. Apple's Mac Pro manuals page (macworld.com/6217) has more information.

MacBook Pro

RATING EASY You need only to remove the battery, three screws, and the memory door.

Unibody MacBook Pro

RATING EASY Getting at the RAM is similar on all unibody MacBook Pros: Remove the bottom cover, disconnect the battery, and release the RAM locking tabs.

MacBook

RATING EASY The RAM is next to the battery in the early MacBook models. Just remove the battery, followed by the memory access door, and pull on the levers to access the old RAM.

Unibody MacBook

RATING EASY The unibody MacBook has a slightly different opening procedure, but its RAM is just as easy to replace as that of its older sibling. Just remove the bottom cover to gain access to the RAM.

MacBook Air

RATING IMPOSSIBLE Unfortunately, you can't upgrade the MacBook Air's RAM: It is soldered onto the logic board.

MAC RAM UPGRADES: **DESKTOPS**

Computer Model	RAM Type	Memory Speed	Max RAM (according to Apple)/Max RAM (actual)	Find Code to RAM Replacement Guide
iMac				
17-inch iMac/G5 (model A1058)	PC-3200	400MHz	2GB/2GB	6223
17-inch iMac/G5 (model A1144)	PC2-4200	533MHz	2.5GB/2.5GB	6224
17-inch iMac/Intel	PC2-5300	667MHz	2GB/2GB (EMC 2104, 2110, 2124), 3GB/3GB (EMC 2114)	6225
20-inch iMac/G5 (model A1076)	PC-3200	400MHz	2GB/2GB	6226
20-inch iMac/G5 (model A1145)	PC2-4200	533MHz	2.5GB/2.5GB	6227
20-inch iMac/Intel (EMC 2105 and 2118)	PC2-5300	667MHz	2GB/2GB (EMC 2105), 3GB/3GB (EMC 2118)	6228
20-inch iMac/Intel (EMC 2133 and 2210)	PC2-5300 (2133), PC2-6400 (2210)	667MHz/ 800MHz	4GB/4GB (EMC 2133), 4GB/6GB (EMC 2210)	6229
20-inch iMac/Intel (EMC 2266)	PC3-8500	1066MHz	8GB/8GB	6230
21.5-inch iMac/Intel	PC3-8500	1066MHz	16GB/16GB	6231
24-inch iMac/Intel (EMC 2111)	PC2-5300	667MHz	3GB/3GB	no guide
24-inch iMac/Intel (EMC 2134 and 2211)	PC2-5300 (2134), PC2-6400 (2211)	667MHz/ 800MHz	4GB/4GB (EMC 2134), 4GB/6GB (EMC 2211)	no guide
24-inch iMac/Intel (EMC 2267)	PC3-8500	1066MHz	8GB/8GB	no guide
27-inch iMac/Intel	PC3-8500	1066MHz	16GB/16GB	6232
Mac Mini				
Mac Mini/G4	PC-2700	333MHz	1GB/1GB	6233
Mac Mini/Intel (model A1176)	PC2-5300	667MHz	2GB/2GB (Core Solo, Core Duo), 2GB/3GB (Core 2 Duo)	6234
Mac Mini/Intel (model A1283)	PC3-8500	1066MHz	4GB/8GB	6235
Mac Pro				
Mac Pro/Intel (original)	PC2-5300	667MHz	16GB/32GB	no guide
Mac Pro/Intel (early 2008)	PC2-6400	800MHz	16GB/32GB	no guide
Mac Pro/Intel quad-core (early 2009)	PC3-8500	1066MHz	16GB/32GB	no guide
Mac Pro/Intel eight-core (early 2009)	PC3-8500	1066MHz	32GB/64GB	no guide

*To get to a RAM Replacement Guide, type the find code after *macworld.com/* in your browser's address field. For example, macworld.com/6223 will take you to the RAM Replacement Guide for the 17-inch iMac/G5 (model A1058).

Kyle Wiens has 6GB of PC-5300 DDR2 RAM in his MacBook Pro and wants more. He is also the CEO of iFixit (www.ifixit.com), a repair community and Mac parts retailer.

Should You Install an SSD?

How much faster could a solid-state drive make your Mac?

BY JAMES GALBRAITH

Seven years ago, SanDisk announced its first 1GB flash memory SD card (macworld.com/6218); it had an estimated street price of $330. These days, for the same money, you could buy a 128GB solid-state drive (SSD), based on NAND flash. The drop in price means that it's become reasonable to consider an SSD as an extra drive for your Mac, or even as a replacement for the built-in hard drive.

Most mainstream solid-state drives top out at 256GB. (Some vendors have announced 400GB SSDs, but at press time those drives were not yet shipping.) That's bigger than the internal drives found in entry-level MacBooks, but smaller than the multiterabyte standard drives currently available. That same $330 could buy you six 250GB 5400-rpm drives, or three 500GB drives with a faster 7200-rpm rotational speed.

OCZ Vertex Series Mac Edition

SSDs CAN HAVE READ AND WRITE TIMES THAT ARE 4 TO 5 TIMES FASTER THAN STANDARD DRIVES.

So why would you want to spend more money for less storage capacity? There are several reasons, including durability, noise, and energy consumption. But for most people considering an SSD, the most compelling reason is speed: SSDs can have read and write times that are four to five times faster than a standard spinning hard drive. Are such improvements worth the investment?

Driven to Perform

To test the performance benefits of SSDs over standard rotating hard drives, we recently rounded up eight of the devices. They ranged in price from $262 for a 128GB Kingston SSDNow V series drive (macworld.com/6219) to $800 for a 256GB WD SiliconEdge Blue drive (macworld.com/6220). Price per gigabyte ranged from $2.05 (that 128GB SSDNow V Series Drive) to $4.00 (100GB Mercury Extreme Pro RE SSD [macworld.com/6221]). All are 2.5-inch internal models.

To test them, we installed each one in turn in a late-2008 unibody MacBook with a 2.4GHz Core 2 Duo processor and 2GB of RAM. Not only was the system ripe for an update, but its hard drive is also easily accessible (macworld.com/6222).

To establish a baseline, we tested the MacBook's standard internal drive (a 5400-rpm 2.5-inch Toshiba). We then ran the same tests on a 320GB WD Scorpio Black 7200-rpm drive—faster than the standard one, but much less expensive than an SSD.

On average, all but one of the SSDs were between 42 and 48 percent faster than the MacBook's stock drive. (The lone outlier—the Kingston SSDNow V series—was only 33 percent faster; its test results were so erratic that we had to run each test five times or more and then average the results.)

Overall, the OCZ Vertex was the fastest of the SSDs. It scored the best times in four of our five hand-timed tests. It was 75 percent faster than the stock drive at duplicating a 1GB file, 53 percent faster when unzipping a 2GB folder in the Finder, and 59 percent faster when opening a 300MB Photoshop file.

In addition to our real-world stopwatch tests, we also ran the AJA System Test (an automated benchmark that mimics the throughput of

Kingston SSDNow V Series

video files). Again, the SSDs were a lot faster than the standard spinning models. For example, in the write tests, the MacBook's stock hard drive averaged 46 MBps. The slowest SSD (the Kingston SSDNow V series) averaged 143 MBps—more than three times as fast. Four of the SSDs neared 200 MBps.

Reliability Concerns

SSDs are new to the consumer desktop, especially on the Mac, and there are questions about how well their reliability and performance will hold up over time. The concern is that the longer you use an SSD, the worse it will work.

Fortunately, several technologies address that problem; if you are shopping for an SSD, check to see that it supports these technologies. *Wear-leveling* manages where data is written, to avoid using the same data cells over and over again. *Overprovisioning* sets aside some available storage space for administrative purposes and for backing up dead or corrupted data blocks. A third technology—*TRIM*—allows the operating system to manage garbage collection and reallocation of blocks after data has been deleted. Unfortunately, Mac OS X doesn't support this last one.

THE CONCERN IS THAT THE LONGER YOU USE AN SSD, THE WORSE IT WILL WORK.

The Bottom Line

There's no doubt that SSDs are faster than traditional 2.5-inch rotating hard disks. But are they fast enough to compensate for their higher prices and lower capacities? Only if you're really rich or if your job demands the absolute fastest performance possible.

If you do decide to go with an SSD, note that the OCZ Vertex was the fastest one we tested. If peace of mind matters to you, consider the OWC Mercury Extreme Pro RE SSD, which is speedy and comes with a five-year warranty. For now, the Kingston SSDNow V Series drive's erratic performance prevents us from recommending it.

James Galbraith is *Macworld*'s lab director.

SOLID-STATE DRIVES: **A COMPARATIVE SAMPLE**

Company	Model	Capacity (GB)	Price	Price per GB	Duplicate 1GB folder (sec)	Uncompress 2GB zip file (sec)	Open Photoshop (sec)	Low-memory Photoshop (sec)	Startup (sec)	AJA disk test write (MB/sec)	AJA disk test read (MB/sec)
Crucial	M225	256	$700	$2.73	13	43	**9**	**30**	45	198	241
Kingston	SSDNow V Series	128	$262	$2.05	20	92	**9**	32	**34**	143	224
Kingston	SSDNow V+	128	$319	$2.49	14	44	10	31	45	176	208
OCZ	Agility Series	128	$324	$2.53	14	44	10	**30**	36	174	200
OCZ	Vertex Series Mac Edition	120	$344	$2.87	**11**	**42**	**9**	**30**	36	198	244
OWC	Mercury Extreme Pro RE SSD	100	$400	$4.00	14	47	**9**	**30**	36	199	**263**
OWC	Mercury Extreme Pro SSD	120	$380	$3.17	14	47	**9**	**30**	36	**201**	261
Western Digital	SiliconEdge Blue	256	$800	$3.13	13	45	**9**	31	46	162	231
Toshiba	*MK2553GSX (stock)*	*250*	*n/a*	*n/a*	*44*	*89*	*22*	*37*	*56*	*46*	*50*
Western Digital	*Scorpio Black 7200*	*320*	*$83*	*$0.26*	*27*	*58*	*15*	*35*	*51*	*78*	*81*

n/a = not applicable. Best results in **bold**. Reference systems in *italics*. All drives were installed in a 2.4GHz Core 2 Duo unibody MacBook with OS X 10.6.3 and 2GB of RAM. We duplicated a 1GB folder and uncompressed a 2GB zip archive in the Finder. We measured the amount of time it took for Photoshop CS4 to get to a ready state after we dragged a 300MB .psd file to the application's Dock icon and then ran a 5-task Action script. We used AJA System Test with a video frame size of 1920 by 1080 10-bit RGB and a file size set to 2GB.—MACWORLD LAB TESTING BY JAMES GALBRAITH

The Wi-Fi Troubleshooter

Find—and fix—the leading cause of Wi-Fi slowdowns

BY GLENN FLEISHMAN

If your Wi-Fi network isn't delivering the speeds you expect (you shouldn't be getting less than 20 Mbps over 802.11n), the leading suspect is *interference*—when competing wireless signals disrupt the transmission of your data; that data then has to be resent or sent at a slower speed. Diagnosing and eliminating interference is one of the best fixes for slow Wi-Fi.

Measure the Problem

The first thing to do is launch AirPort Utility (/Applications/Utilities) and select your base station. (For the purposes of this story, I'll assume you're using an AirPort base station; many of the tips apply to other wireless routers as well, but the details will obviously change.) Click on Manual Setup and then on the Advanced view icon. Select Logs and Statistics at the bottom of the screen and then the Wireless Clients tab. There, you'll see which devices are connected to your base station and measurements of those connections.

Look at the numbers for signal and noise. Both are measured on a negative scale; the further a number is below zero, the weaker the signal or noise. You want a strong signal and a weak noise reading. Signal should be closer to zero than noise, with –25 being far better than –50. You'd rather have noise down at –90 (very weak) than at –50. (The measurement is logarithmic; every 10 units represents a tenfold change.)

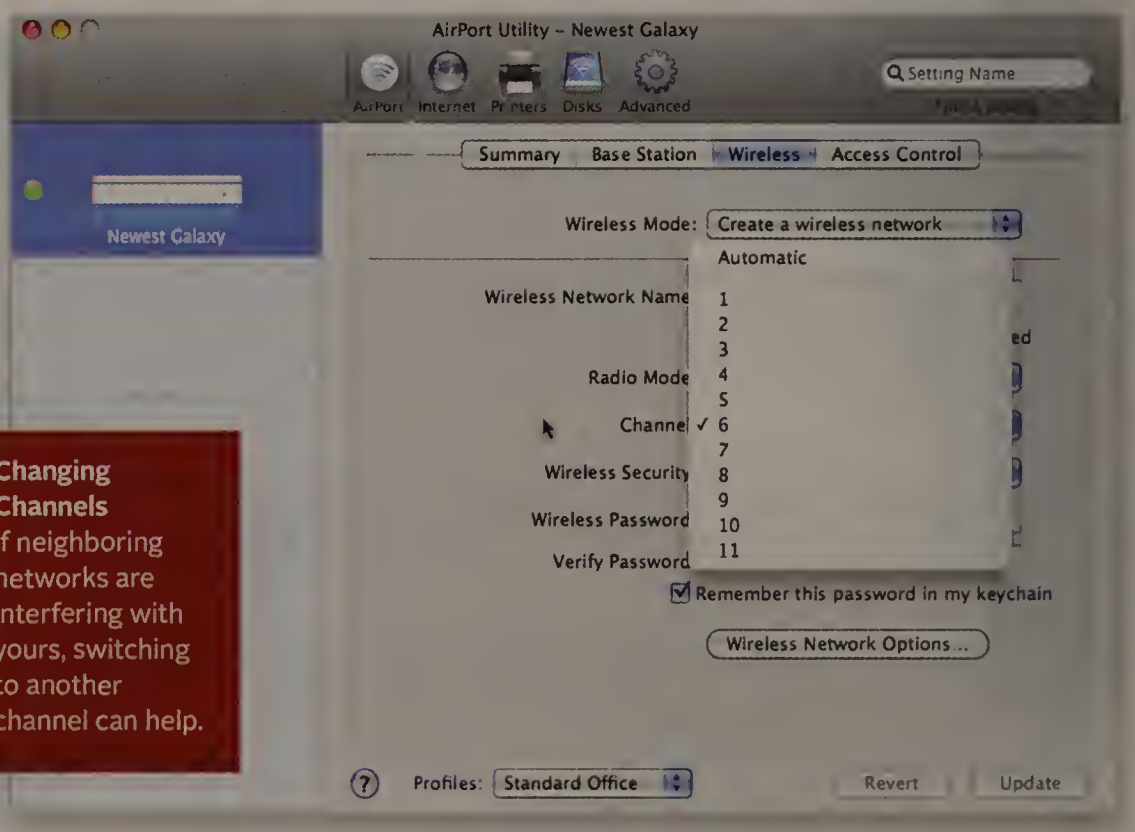
Poor signal or noise numbers (or a lower-than-expected rate reading) could be a sign of interference. If that's what you find, the next step is to identify the culprit. Download and install iStumbler (payment requested; www.istumbler.net). This utility provides a list of all the networks that your Wi-Fi adapter can sense, and the channel each one is using. If one of them is using the same channel you are, it could be the cause of your problem.

Change Channels, Bands

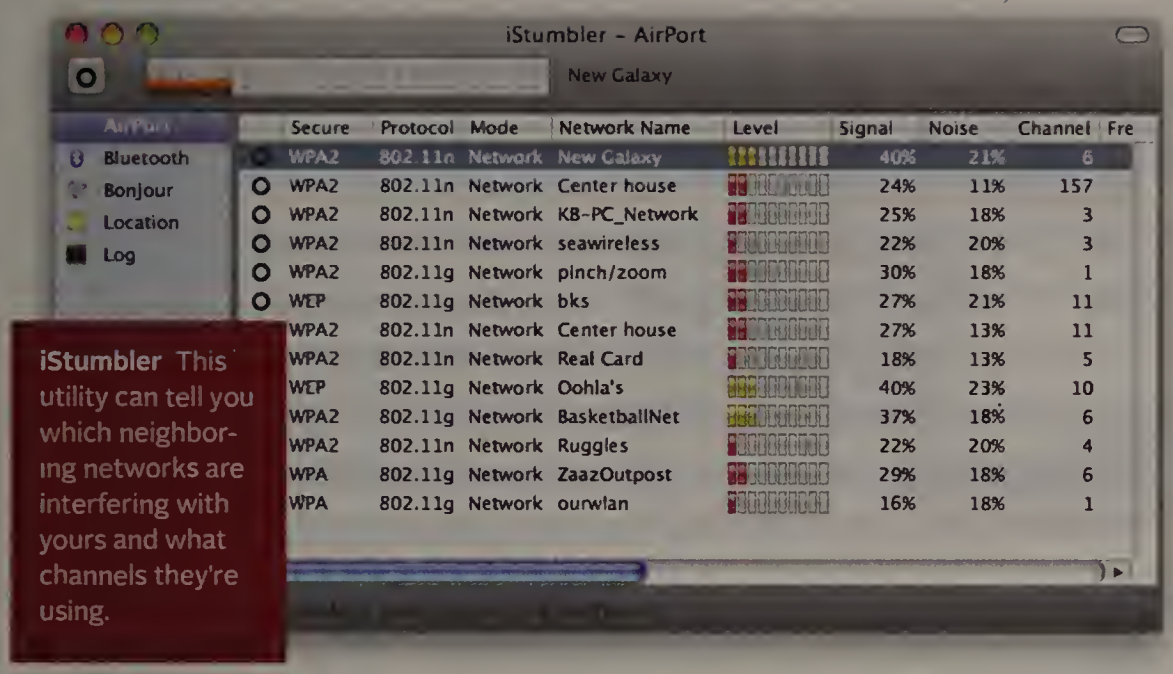
If that's the case, try changing the channel you're using. The easiest way to do that is to restart your router. When it starts back up, it will automatically pick the channel that's least used.

Unfortunately, the channel it picks isn't always the best choice; also, the longer your router stays on, what was once the least used channel may become the most crowded. To make sure you're using the best channel, switch manually.

In the 2.4GHz band, you want to pick among 1, 6, and 11, whichever is being used by the fewest neighboring networks; if performance stays poor, try another. In the 5GHz band, choose any of the eight channels Apple makes available. The four lower-numbered ones (36, 40, 44, and 48) have less reach



Changing Channels If neighboring networks are interfering with yours, switching to another channel can help.



iStumbler This utility can tell you which neighboring networks are interfering with yours and what channels they're using.

than the higher-numbered ones (149, 153, 157, and 161), but they can also reduce interference; a high-numbered channel will boost range but also interfere with other networks.

To change the channel, select your base station in AirPort Utility, click on Manual Setup, then open the Wireless tab in AirPort view. On a 2007 or 2008 AirPort Extreme or Time Capsule, or on any 802.11n AirPort Express, select a channel from the Channel pop-up menu. On AirPort Extreme and Time Capsules from 2009 and later, select Manual from the Radio Channel Selection menu, click on Edit, and then select a channel from the 2.4GHz or 5GHz Channel menu.

If your base station can use only the 2.4GHz band, you could upgrade to a simultaneous dual-band router. Then you could move devices that support 5GHz to that band without giving up on older 2.4GHz hardware. Most Macs released since 2006 can use 5GHz, as can the iPad and the Apple TV. The iPhone and the iPod touch use 2.4GHz only.

Other Steps

If none of the above helps, you can try a couple of less technical things. First, try moving the base station. If you can put it as far away as possible from outside walls or other homes or apartments (the sources of interference), give it a try.

Second, talk to your neighbors. It's possible they're having the same trouble. Perhaps you can agree to coordinate channel usage. Help them if they don't know how to make changes. (While you're at it, turn on network security for them, if they haven't done so already.)

Find Other Causes

If AirPort Utility or iStumbler has ruled out other nearby networks as culprits, investigate other causes.

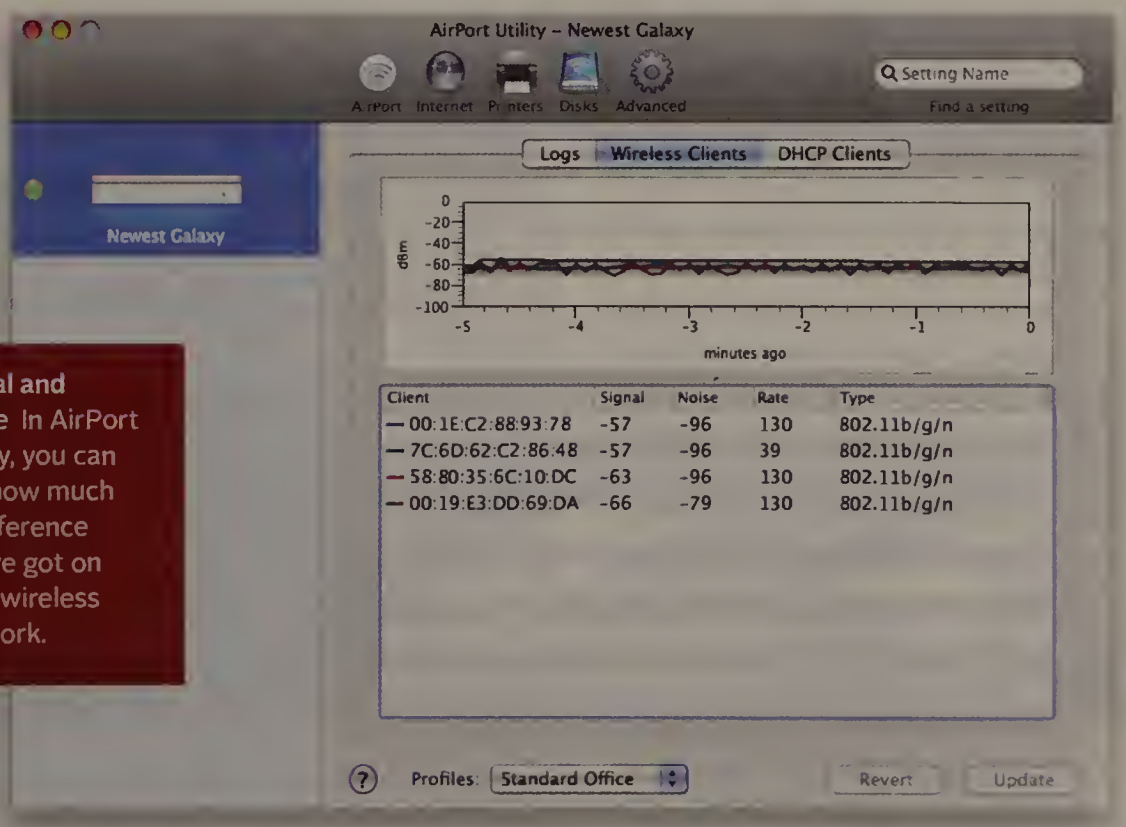
Are you using any older wireless hardware, such as a baby monitor, old Bluetooth equipment (more than three or four years old), or a nonstandard wireless keyboard with a USB dongle? Do you have a 2.4GHz cordless phone? Is your base station near a microwave oven? Those circumstances could all cause interference problems.

Turn off every non–Wi-Fi wireless device you have. If the problems go away, start adding each device back one at a time until you find the one that produces the problem, then get rid of it. If it's your phone, check out one of the new 1900MHz DECT6 cordless phones; they don't interfere with either 2.4GHz or 5GHz Wi-Fi.

If the problems persist, you could have a problem with your Wi-Fi radio itself. Look into warranty repair; document all the troubleshooting steps you've tried, because even Geniuses might not believe the radio is at fault.

Glenn Fleishman is the author of *Take Control of Your 802.11n AirPort Network* (TidBits Publishing, 2010) and is a frequent contributor to *Macworld*.

WHAT WAS ONCE THE LEAST-USED CHANNEL MAY BECOME THE MOST CROWDED.



Signal and Noise In AirPort Utility, you can see how much interference you've got on your wireless network.

Bye-Bye, Beach Ball

The spinning Pinwheel of Doom: Why it appears and how to get rid of it

BY GREGORY E. SWAIN

Officially, it's the "spinning wait cursor" or the "spinning disc pointer." Colloquially, it goes by many names, including the Spinning Beach Ball. Whatever you call it, the colorful pinwheel is not a welcome sight.

According to Apple's Human Interface Guidelines, "the spinning wait cursor is displayed automatically ... when an application cannot handle all of the events it receives. If an application does not respond for about 2 to 4 seconds, the spinning wait cursor appears." Which is to say, the beach ball is there to tell you that your Mac is too busy with a task to respond normally.

Usually, the pinwheel quickly reverts to the regular mouse pointer. When it doesn't go away, it becomes what some call the Spinning Beach Ball of Death (also known as the Marble of Doom). At those times, it helps to know why the thing appears and what you can do to make it go away.

Hardware Causes

It's not unusual to see the beach ball when your Mac is performing complex computing tasks. Even everyday activities—such as syncing large files with iTunes—can overtax the CPU.

To find out if the CPU is the bottleneck, open Activity Monitor (/Applications/Utilities) and, in the CPU pane, click on the % CPU column to sort applications by CPU usage. Keep an eye on that column. The processes consuming the most CPU cycles will be at the top.

The beach ball may also appear if you don't have enough RAM or hard-drive space. Virtual-memory paging and swapping (making room in RAM by temporarily moving unneeded data from active memory to the hard drive) consumes CPU cycles. Insufficient RAM means more paging and swapping. Ditto if your startup disk is nearly full and has little space for swap files. In both cases, more swapping demands more CPU cycles, which means that fewer of those cycles are available to your applications.

Again, you can use Activity Monitor to diagnose these problems; click on either the System Memory tab or the Disk Usage tab. In the pie charts shown in these panes, more green is better.

If you can isolate a hardware cause, the solution is obvious: Upgrade. If it's the RAM or the hard drive, you can upgrade those individually. (For advice on that, see "Upgrade Your RAM" or "Should You Install an SSD?") In the case of the CPU, however, that means buying a new Mac. If those aren't viable options for you, you'll just have to run fewer applications concurrently; the more resource-intensive your applications are, the fewer you should run.

The beach ball can also appear when you try to access your hard disk or optical drives (by opening or saving a file, for example) when they're in *standby* mode. (That's when they spin down after a period of inactivity to save energy.)

You can, if you wish, keep your startup disk from ever entering standby mode. To do so, open Energy Saver preferences (in System Preferences) and deselect Put

Activity Monitor If an application keeps crashing, your best tool for finding out why is Mac OS X's own Activity Monitor.

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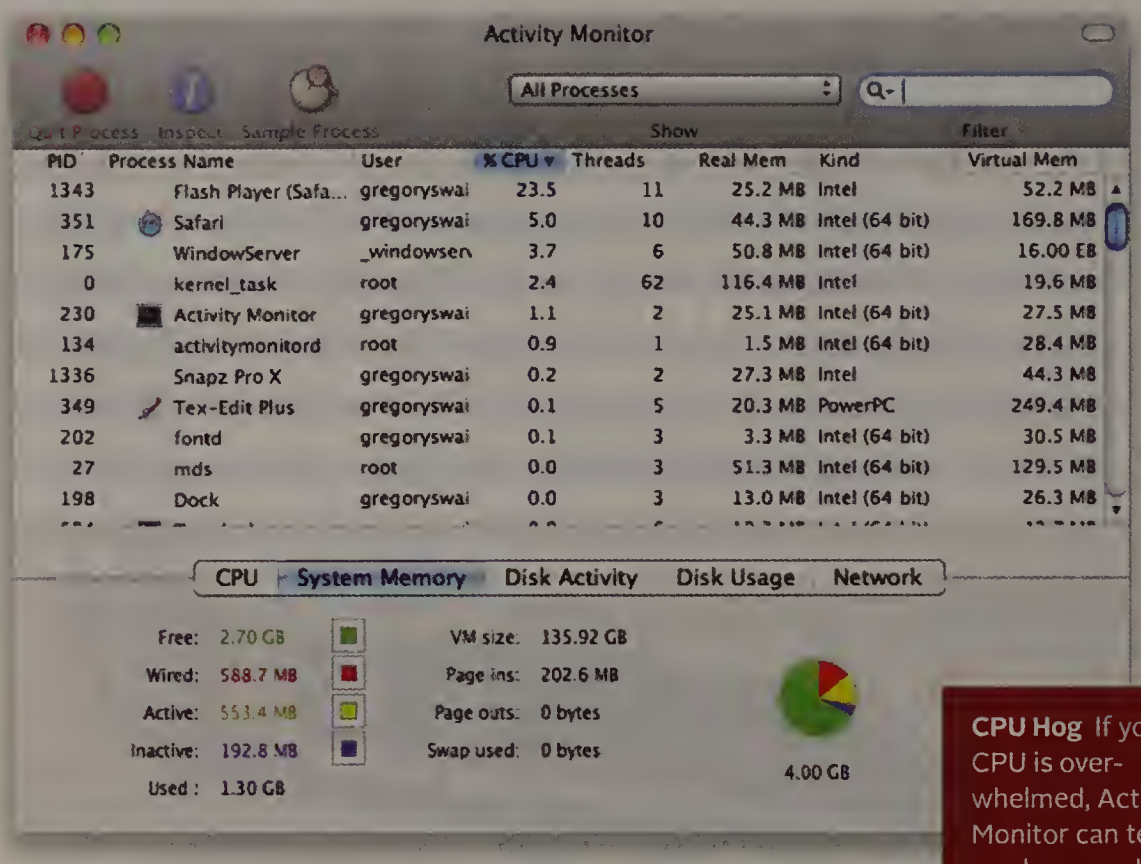


CPU Hog If your CPU is overwhelmed, Activity Monitor can tell you how much of its resources your programs are claiming.

the Hard Disk(s) To Sleep When Possible. Note that all your drives will still enter standby mode when your Mac enters its own sleep mode; you may see the beach ball if you wake your Mac and then immediately try to access a disk.

The Energy Saver option primarily affects your startup drive alone. Other drives (internal and external) may still spin down on their own schedules; that means you could see the beach ball if you tried to access them at the wrong time. Contact the manufacturer of the drive to see if a firmware update is available to improve the drive's cooperation with Mac OS X's power management.

Software Causes

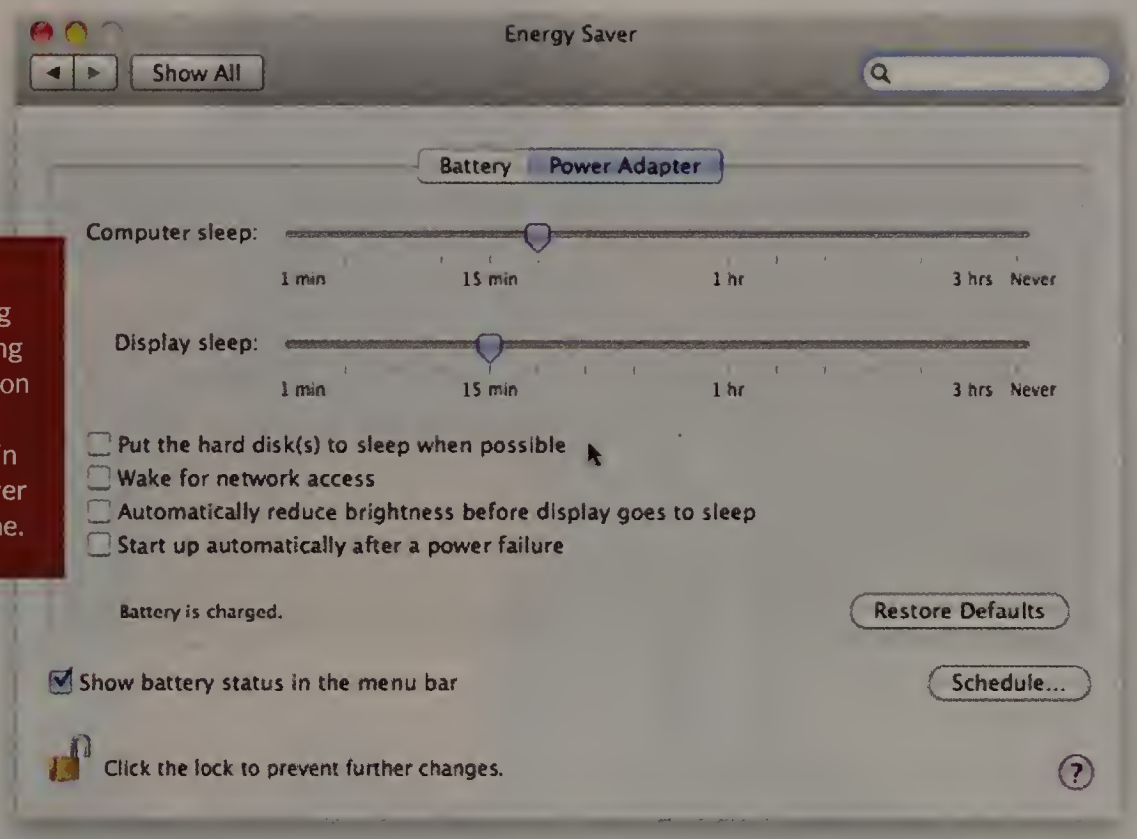
The beach ball can also be caused by software. An application can hang in an infinite loop or simply be inefficient. A background process can run amok. An errant third-party plug-in can turn an app into a slug.

If you suspect that software is the problem, wait a few minutes to see if the application responds or crashes. While you're waiting, open Activity Monitor (if you can) and check the % CPU column to see which apps are hogging CPU cycles.

If the application doesn't resume, it should appear in Activity Monitor in red text, with the words *Not Responding* next to its name. If it's an application you opened, select it, click on Quit Process, then on either Quit or Force Quit.

If you can switch to other applications and the Spinning Beach Ball of Death appears in all of them, that could mean a system process is hung up. In that case, try to shut down or restart your Mac by pressing ⌘-Eject or ⌘-Control-Eject, respectively. Otherwise, press and hold the power button to shut down your Mac and restart. When the system is back up, check Console (/Applications/Utilities) to see if you can determine the cause.

You can't prevent every instance of the Spinning Beach Ball of Death—it *is* there to inform you that your Mac is busy—but a little patience and the occasional forced quit or restart should help make those instances a little bit more bearable.



Suspending Standby Trying to use a sleeping disk can summon the beach ball. Turn off sleep in the Energy Saver preference pane.

Gregory E. Swain runs The X Lab (www.thexlab.com), a site dedicated to trouble-shooting Mac OS X.

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IMG1114-edit.
Bag: Mamba shift, laptop backpack ($149.95), visit booq.com for more details.
Model: John Dill (Designer, Photographer & DJ; pickledhouse.com). Location: NY Subway
Photo: Erik Borzi (erikborzi.com)

20 ESSENTIAL iPAD APPS

ILLUSTRATION BY HUAN TRAN

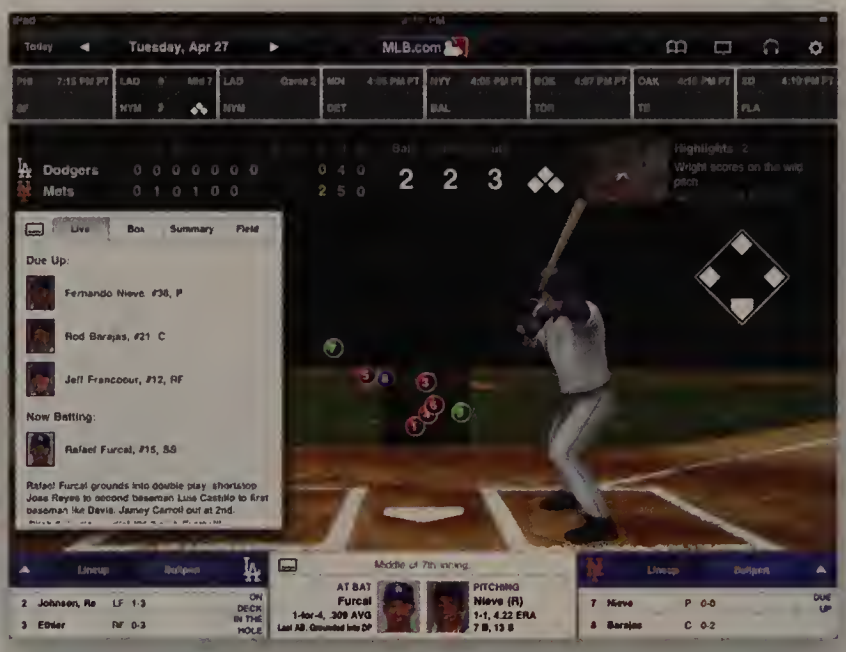
You've just joined the ranks of iPad owners, unwrapping a shiny new tablet you can call your own. But your choices didn't end with picking whether to get a 3G or Wi-Fi–only model. Now you have to decide what to put on your new iPad.

App developers aren't making the decision easy for you. Shortly after the iPad's launch, Apple said that there were 3500 iPad-optimized offerings in the App Store, and that number has only grown between then and now.

But not to worry—we've kept a close eye on the iPad-centric additions to the App Store to help make your choices a little bit easier. We've looked for apps across a wide spectrum of categories that also make the most of the iPad and its expansive screen real estate. We came up with a list of 20 apps that we think every iPad owner should download. And after you get a chance to use the following apps, we think you'll agree.

THE PROGRAMS WE THINK EVERY iPAD OWNER SHOULD HAVE

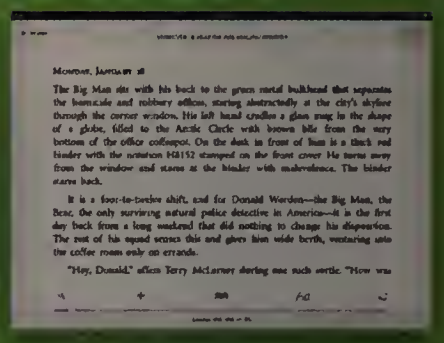
ENTERTAINING APPS



At Bat 2010 for iPad

At Bat 2010 for iPad takes advantage of the iPad's expansive screen real estate to slather on almost as much data as you could ever want, mixing in multimedia features aplenty. The app's main screen features a scoreboard with all the current day's games. Tap on an active game to bring up a virtual ball field with live pitch-by-pitch game data. An audio icon lets you listen to any game's radio broadcast, with either home or away announcers. The video icon lets you watch a featured "game of the day" live; subscribers to MLB's premium video service can watch video of any out-of-market game. There's also an in-app newsreader that lets you read all the stories on MLB.com, including ones that focus in on your favorite teams.—**JASON SNELL**

$15; MLB.com; macworld.com/6132



KINDLE

There's a battle brewing for the iPad e-book–reader crown between Apple's iBooks ( ) and Amazon's Kindle. Though iBooks has plenty going for it, the vote here goes—just barely—to Kindle. Both apps let you jot on-screen notes, add bookmarks, and adjust brightness, and iBooks even lets you choose your viewing font and view PDFs and ePub books. But the Kindle app offers better viewing modes (black-on-white, white-on-black, and sepia); and, more importantly, Amazon offers far more books, giving Kindle the edge—for now.—**DAN FRAKES**

free; Amazon.com; macworld.com/6020

IMDb MOVIES & TV

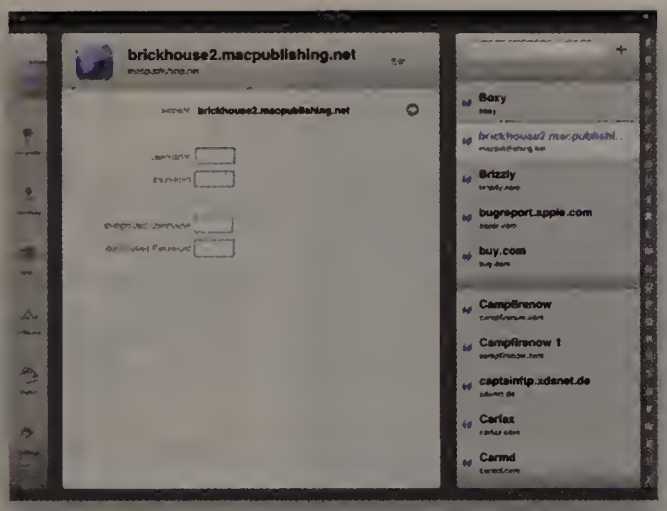
All you want to do is watch *Tombstone*, but your viewing companions won't stop nattering on about how they could swear they've seen the actor playing Ike Clanton in some other movie at some point in their lives. Which is when you whip out your iPad, fire up IMDb Movies & TV, and, in a few taps, tell everyone that, yes, the guy playing Ike Clanton is also the guy from *Avatar*. IMDb's multiple panes let you do many more things—look up TV schedules, watch trailers, and access movie reviews—but being able to summon up info about what you're watching from the comfort of your couch is worth the price of admission.—**PHILIP MICHAELS**

free; IMDb; macworld.com/5666

ABC Player

Your favorite ABC programs are never more than a tap away with ABC Player, a free app that streams the network's TV shows to your iPad on demand with limited commercial interruption. Wi-Fi video image quality is as impressive as the laughs on *Modern Family*. The recently added ability to stream shows via a 3G connection leads to some lower-quality video—compression artifacts are more visible in action sequences like in *Lost*, though hardly noticeable in close-ups. You won't find every episode of every show, but Featured and Scheduled views make finding your favorites easy. Whether you missed the latest *Dancing with the Stars* or want a mobile view of *The View*, this is a great app for keeping up with your must-watch TV shows.—**JAMES GALBRAITH**

free; ABC Digital; macworld.com/6044



1Password for iPad

1Password, which stores online passwords and other sensitive info, is a great addition to any Mac, and the iPad release is just as valuable. As with the iPhone version (macworld.com/6144), you can use the app's built-in browser to log in to secure Websites, or you can opt for a handy Safari bookmarklet that grabs your login info from 1Password for easy pasting into mobile Safari. But while the iPhone's small screen makes browsing your confidential data less than ideal, the iPad version's native interface is stellar, perhaps even better than the one in the Mac version.—**DAN FRAKES**

$7; Agile Web Solutions; macworld.com/6145

AIR VIDEO

Chances are you can't cram too much video onto your iPad before you start running low on space. Wouldn't it be great if you could just stream all those video files from your home Mac's capacious hard drive? Air Video lets you do exactly that. Install its server software on your Mac, enter the Server PIN in the iPad app, and you're ready to rock. Air Video transcodes video into an iPad-compatible file on the fly; you can also queue a bunch of videos to be converted ahead of time.—**DAN MOREN**

$3; InMethod; macworld.com/6133

KAYAK FLIGHTS

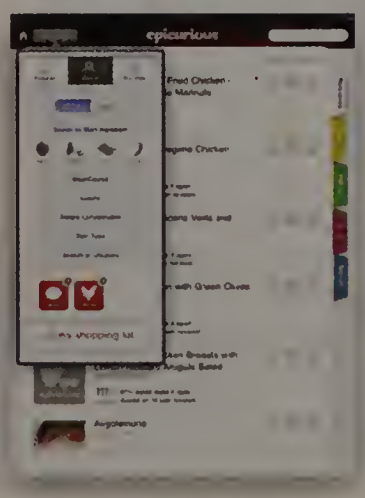
For a glimpse of the difference a multipane interface can make, try Kayak Flights. While you search for flights in one pane, another pane tracks your search history. Other panes track popular searches or provide hotel prices at your final destination. You can filter search results with a tap. Kayak's iPad app improves on the tap-to-drill-down approach of mobile apps and beats most browser searches.—**PHILIP MICHAELS**

free; Kayak.com; macworld.com/6137

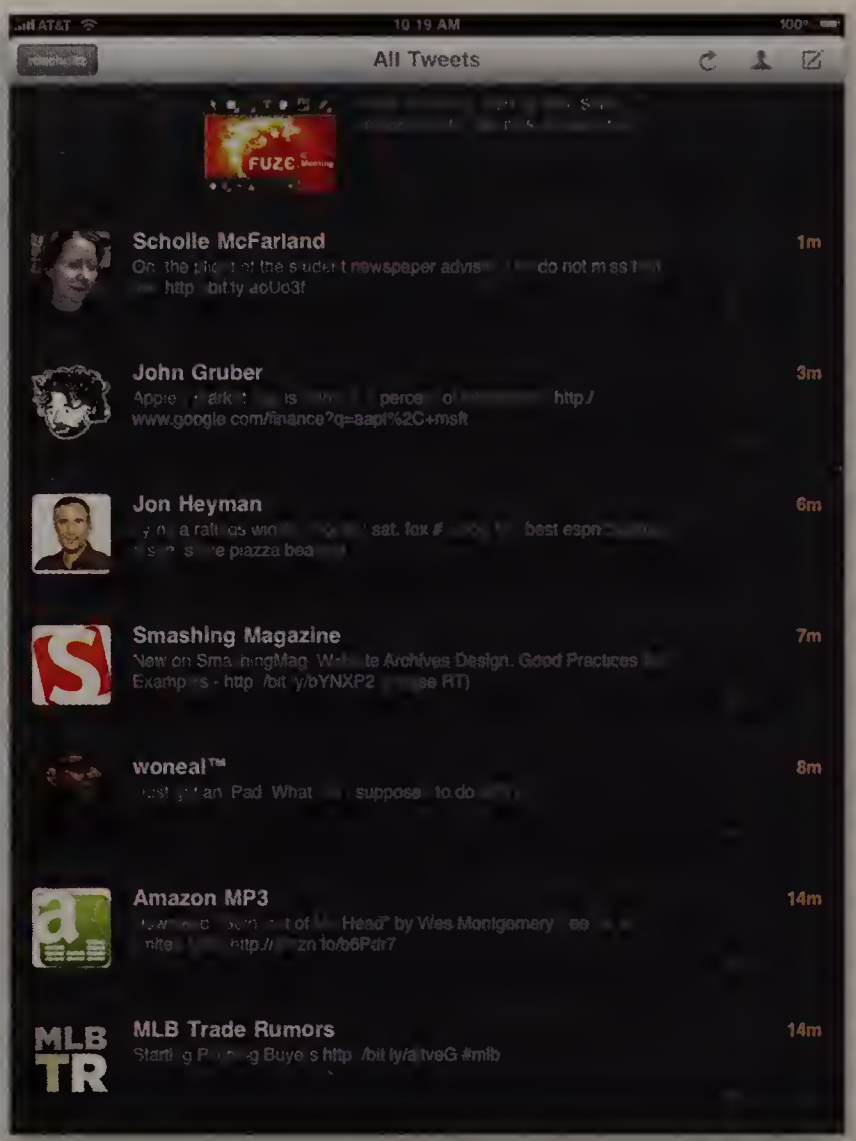
Epicurious Recipes & Shopping List

The iPad could easily be the ideal kitchen computer—especially if it has Epicurious Recipes & Shopping List installed. Epicurious is an iPad- and iPhone-friendly compendium of recipes for food and drink from a variety of credible culinary sources. You can search by ingredient, cuisine, course, and more. When you've selected your dishes, the app compiles your shopping list. The free app is certainly better than any cookbook at helping you turn a motley collection of ingredients into something to eat.—**DAN MILLER**

free; Condé Nast Digital; macworld.com/6138



STAY IN TOUCH



Twitterrific for iPad

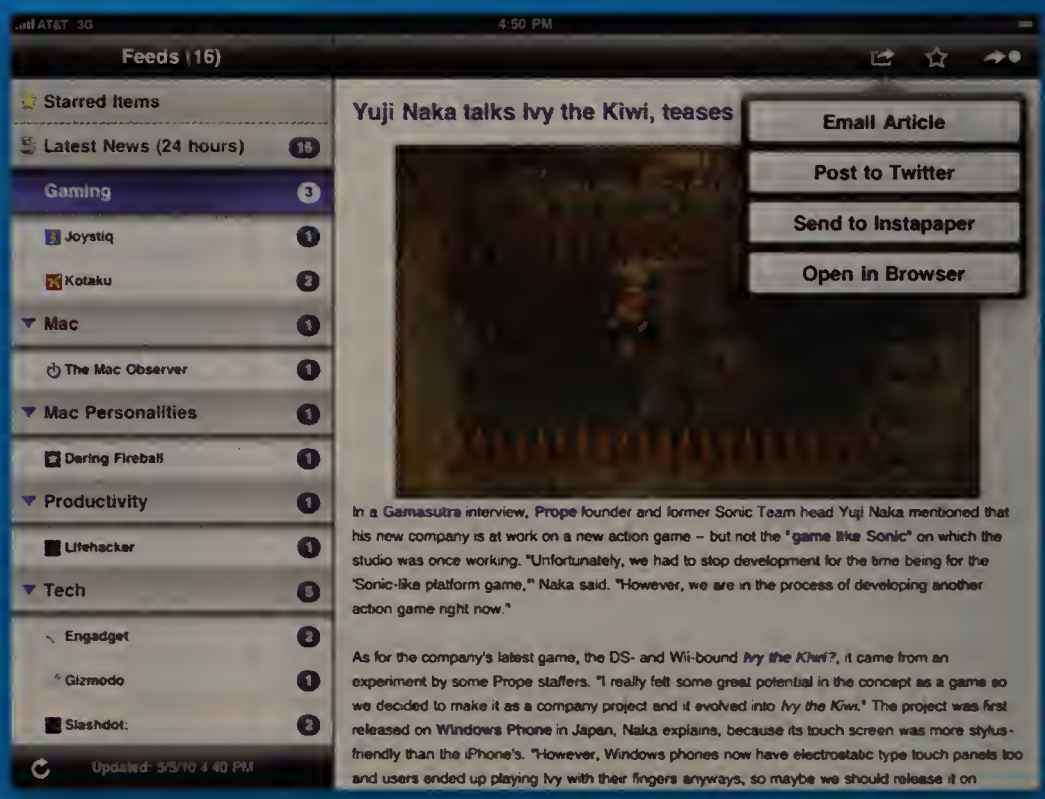
One of the premiere iPhone Twitter clients (macworld.com/5024) has made the leap to the iPad. The Iconfactory's Twitterrific is among the cream of the crop on Apple's latest device, thanks to a split-pane landscape view that makes it easy to browse mentions, direct messages, favorites, lists, trends, and more. Contextual pop-ups let you view a threaded conversation, embedded image, or user profile without losing your place in your timeline, and there's a built-in Web browser for checking out those links your friends are always posting. Tweets are handily color-coded to show you which are your own, which mention you, and which are direct messages. By default, the app is ad-supported, but you can upgrade to the ad-free premium version, which supports multiple accounts, via a $5 in-app purchase.—**DAN MOREN**

free; The Iconfactory; macworld.com/6134

NETNEWSWIRE FOR iPAD

Everyone from Apple executives to product reviewers has touted the iPad for its news-reading experience. And while the focus may be on apps from news organizations and media titans, it turns out the iPad is just as adept at browsing your collection of RSS feeds. The superb NetNewsWire for iPad lets you quickly scroll through your feeds, starring items that you want to remember, or sharing them with friends via e-mail or Twitter. The split-pane view makes it easy to avoid getting lost even if you've got folders within folders. There's also a built-in browser for viewing links, support for the Instapaper service if you want to save something to read later, and support for syncing with Google Reader and both NetNewsWire for Mac and iPhone.—**DAN MOREN**

$10; NewsGator; macworld.com/6135



NYT Editors' Choice

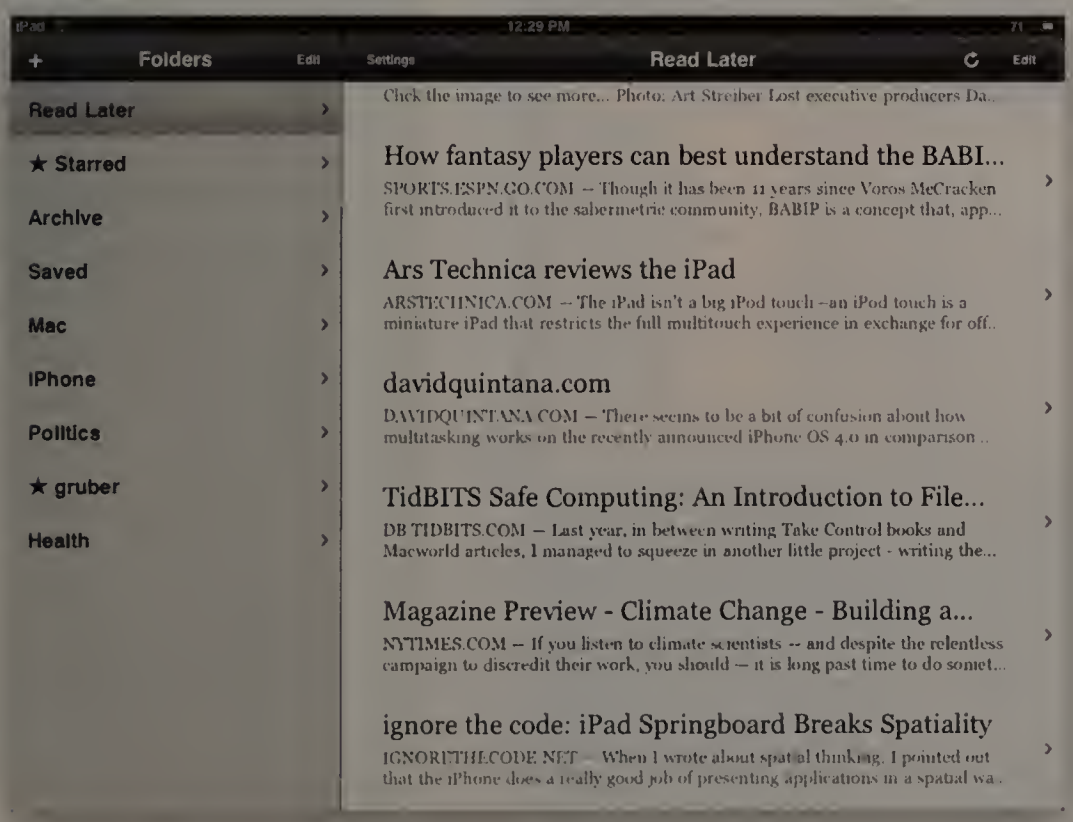
Despite its dowdy reputation, the *New York Times* has actually been one of the leaders in taking news digital. Its Website has for years featured some of the best interactive news tools on the Web. And the NYT Editors' Choice iPad app is good enough that Steve Jobs highlighted it at the tablet's big debut. As the name implies, this isn't the entire *New York Times*: It's a selection of the day's news, business, technology, opinion, and feature stories. But (as they used to say about the *Wall Street Journal*'s front page) even if you read only these stories, you'll still be better informed than 90 percent of your fellow citizens. Sure, the ads can occasionally be a pain. But in wrapping the *Times'* definitive reporting in a sleek, easy-to-use interface, NYT Editors' Choice becomes one of the few must-have news apps.—**DAN MILLER**

free; The New York Times Company; macworld.com/6143

NPR FOR iPAD

Who said Internet audio killed radio? NPR for iPad proves that networks can embrace the Internet to make their radio and Web offerings even more compelling. Like NPR's iPhone app (macworld.com/5411), the iPad version lets you browse NPR news, shows, and podcasts. You can read or listen immediately, or save audio programs to a playlist you can listen to at any time. The app also lets you listen to streaming audio of many NPR-affiliate stations across the country. But the iPad app puts an emphasis on the multimedia-friendly areas of NPR's coverage—Arts & Life and Music topics—and takes advantage of the iPad's larger screen to make content easier to find and more enjoyable to consume. This is public radio on demand, and it makes NPR appealing even to the NPR agnostic among us.—**DAN FRAKES**

free; NPR; macworld.com/6024

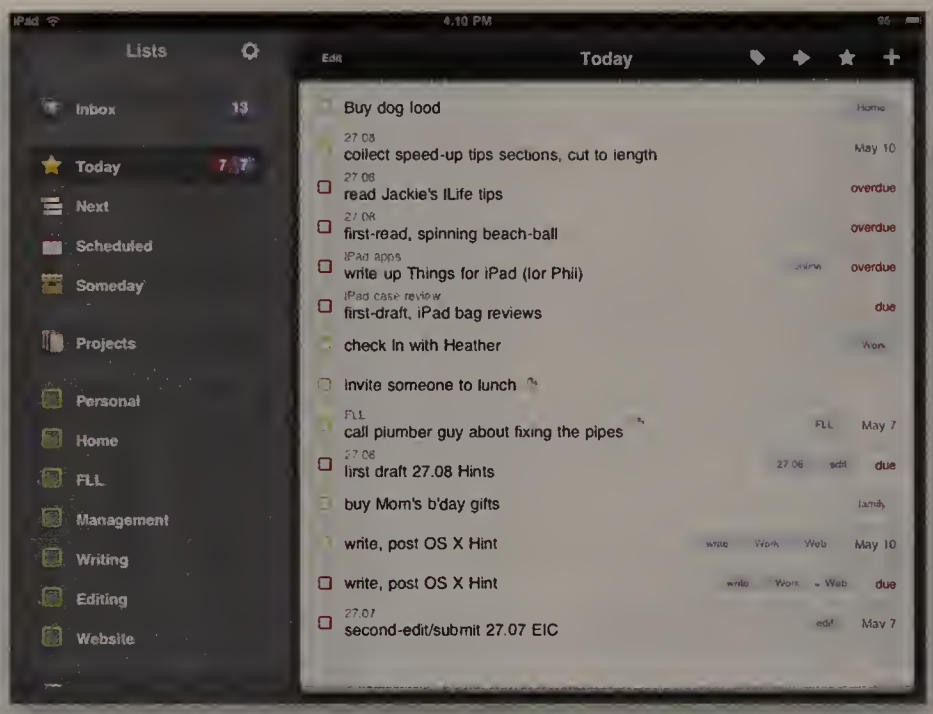


Instapaper Pro

Macworld's editors are big fans of Instapaper, the Web service that lets you save online articles for later reading. But it's the hybrid Instapaper Pro app, not Safari, that offers the best way to do that reading. The app lets you browse your saved articles, even when you're offline, in a Mail-like interface. When you choose an article to read, the article's text and layout are optimized for the iPad's screen. (The app also works on the iPhone and iPod touch.) You can further customize the font, font size, spacing, and margins that work best for you; there's even a gray-on-black night mode for easier reading in dim lighting. Instapaper Pro is one of the most-used apps on my iPad; download it, and I bet that it'll claim the same status on yours.—**DAN FRAKES**

$5; Marco Arment; macworld.com/6018

GET THINGS DONE



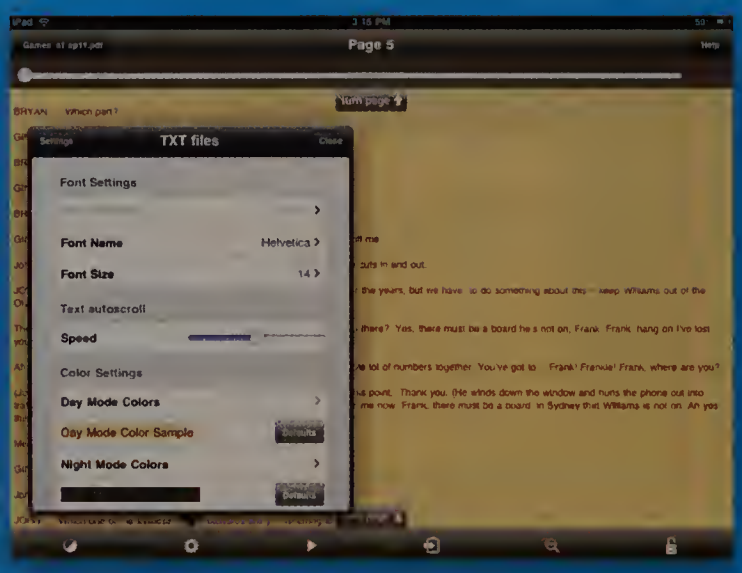
Things

Like calendars and contact managers, iPad to-do apps don't exist in isolation: They have to keep track of your tasks no matter where you are or which device (an iPad, an iPhone, or a Mac) you're using. So far, Things is the best to-do app we've seen for the iPad, in large part because of how easily it works with the Mac (macworld.com/5195) and iPhone (macworld.com/6139) versions. On any one of those platforms, the program strikes a great balance: It's powerful and flexible enough to manage even the toughest workload, but it's not so complex that learning to use the program becomes a task in itself. And syncing your to-do lists from your Mac to an iPad and back couldn't be easier—you won't have to worry about buying the dog food twice.—DAN MILLER

$20; Cultured Code; macworld.com/6140

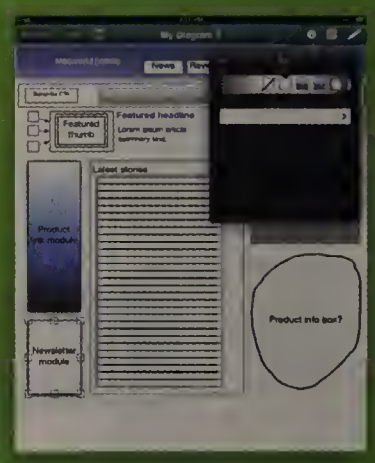
GOODREADER

If you want to take your documents to go, the iPad provides a few different options: You can e-mail them to yourself, or upload them to a Web server. But for going beyond what the built-in software allows, check out GoodReader. It boasts support for PDF, DOC, Pages, TXT, and a handful of other file formats.



With the built-in server, you can easily drag and drop files right from the Finder on your Mac, or you can download a specific URL, browse the Web, or connect to services like iDisk or Dropbox to find the file you're looking for. In addition, GoodReader lets you import images from your iPad's photo library, supports playback of audio files, lets you password protect your files, and even reflows PDFs into plain text.—DAN MOREN

$1; GoodiWare; macworld.com/6136



OMNIGRAFFLE

From the day it was released, the iPad featured a powerful companion in the form of OmniGraffle, the mobile version of The Omni Group's graphing tool for diagramming and mapping out an idea on a cutting-edge visual canvas. The app incorporates a rich set of features from its desktop counterparts—a stencil library, smart layout guides, and rich object-drawing tools—while fully embracing the iPad's Multi-Touch display gestures. You can create multipage documents, and even use some features from OmniGraffle's Pro Mac version, such as sharing layers between canvases. A set of built-in themes can get you started with virtually any diagramming project, and the app can open any documents from its Mac counterpart. As a matter of fact, you may find that some tasks feel faster on the iPad version of OmniGraffle than they do on the Mac version.

—DAVID CHARTIER

$50; The Omni Group; macworld.com/6034

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iPhone 4 Accessories

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for iPhone 4

- 2000mAh Lithium Polymer Battery
- Charge & Sync iPhone 4
- Chargeable from the sun

UP TO 8HRS TALK TIME
15HRS VIDEO/GAME /
60HRS MUSIC

CTIA Emerging Technology Awards

TPU Case for iPhone 4

DCA223

AV Dock Station with Remote Control
for iPhone 4/iPhone 3GS/
iPhone 3G/ iPod Touch/iPod

Show Photos and Videos on a TV screen in 720p Resolution

(Component Cable)

2010 INNOVATIONS

DRA022

P-Flip™ Foldable Power Dock
for iPhone 4/iPhone 3GS/iPhone 3G

- 2000mAh Lithium Polymer Battery
- Charge & Sync iPhone 4/iPhone 3GS/iPhone 3G

UP TO 8HRS TALK TIME
15HRS VIDEO/GAME /
60HRS MUSIC

2010 INNOVATIONS

TPU Case for iPhone 4

DPA065

iHold™ Professional Car Solution for
for iPhone 4/iPhone 3GS/iPhone 3G

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- Strong cradle securely holds your device while you drive and swivels horizontally
- Built-in microphone for hands-free talking
- Superior stereo sound with FM Transmitter App support
- Includes 3.5DC car charger for charging your devices
- Includes Bracelet TPU Case for well protection your iPhone

TPU Case for iPhone 4

DCA234

Colorful Sleeve for iPhone 4

DLA 55 CYL Premium Silicone Case

DLA154 Bracelet TPU Case

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Made for iPod iPhone iPad

PLAY A GAME

Strategery

Strategery is an excellent game on the iPhone. But as a hybrid offering that also runs on the iPad, the Risk-like app proves that bigger really is better. Large battles on the iPhone were unwieldy, forcing you to scroll all over your map. Strategery embraces all the extra screen space that the iPad affords, making Promethean maps not just manageable, but darn fun, too. A bigger screen means that Strategery can show you more at once, and some pretty stellar online-play features let you battle anyone in the world.—LEX FRIEDMAN

$2; Affogato; macworld.com/6163

REAL RACING HD

Maybe it was just good fortune that the iPad is about the size of a go-kart steering wheel. Whatever the reason, it's the perfect platform for a first-person racing game, and Real Racing HD is as perfect a launch title as you'll find. With three game modes, three levels of difficulty, five control schemes, and 48 unlockable cars to drive in 76 unlockable events, you've got enough options to create an experience geared to your exact specifications. Throw it all together with flawless, high-definition graphics, and you've got one of the best racing games in a crowded field of worthy contenders.—MEGHANN MYERS

$10; Firemint; macworld.com/6148

WORDS WITH FRIENDS HD

Words With Friends isn't Scrabble, but it does feel awfully similar to that addicting lexical word game; it improves on the real-world board game in a few key ways. More important, the iPad version of the game improves on the iPhone release (macworld.com/5520). Both you and your online opponent—whether she's in the next room or on the next continent—enjoy easy viewing angles of the entire board without having to worry about jostling tiles.—LEX FRIEDMAN

$3; Newtoy; macworld.com/6147

N.O.V.A. - Near Orbit Vanguard Alliance HD

Already among the best first-person shooters for the iPhone (macworld.com/6149), N.O.V.A. - Near Orbit Vanguard Alliance benefits from beautiful high-resolution graphics and a more intuitive interface on the iPad. You'll still need to get comfortable with the virtual controls, but the iPad's screen expands the game's canvas, allowing you to see more graphical detail and less of your thumbs. Additionally, a larger screen allows for a more comfortable playing position—no more holding the device inches from your face to spot distant aliens. NOVA HD proves that the iPad is a viable first-person shooter platform.

—JAMES SAVAGE

$7; Gameloft; macworld.com/6150

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You know those text ads that sometimes appear alongside your Google search results? Those are sponsored listings—relevant, paid ads based on terms (called keywords) that the advertisers selected. Advertise with Google AdWords, and when potential customers use Google to search on terms related to your business, they can find your ad in that right-hand column. That's great for them, and great for you.

How does Google AdWords work?

Just decide who you're trying to reach—from potential customers in just your town to those across the world—and how much you're willing to pay each time one of them clicks on your ad. Then think of a few terms they might search for to find a business like yours. When a Google user searches on your chosen keywords, they may see your ad. If they click on it, they'll go directly to your website—and pay-per-click pricing means you only pay when your ad gets clicked on.

Why advertise on Google AdWords?

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- **Reach whom you like**—your ad only shows up for people who search on the advertising terms you've chosen
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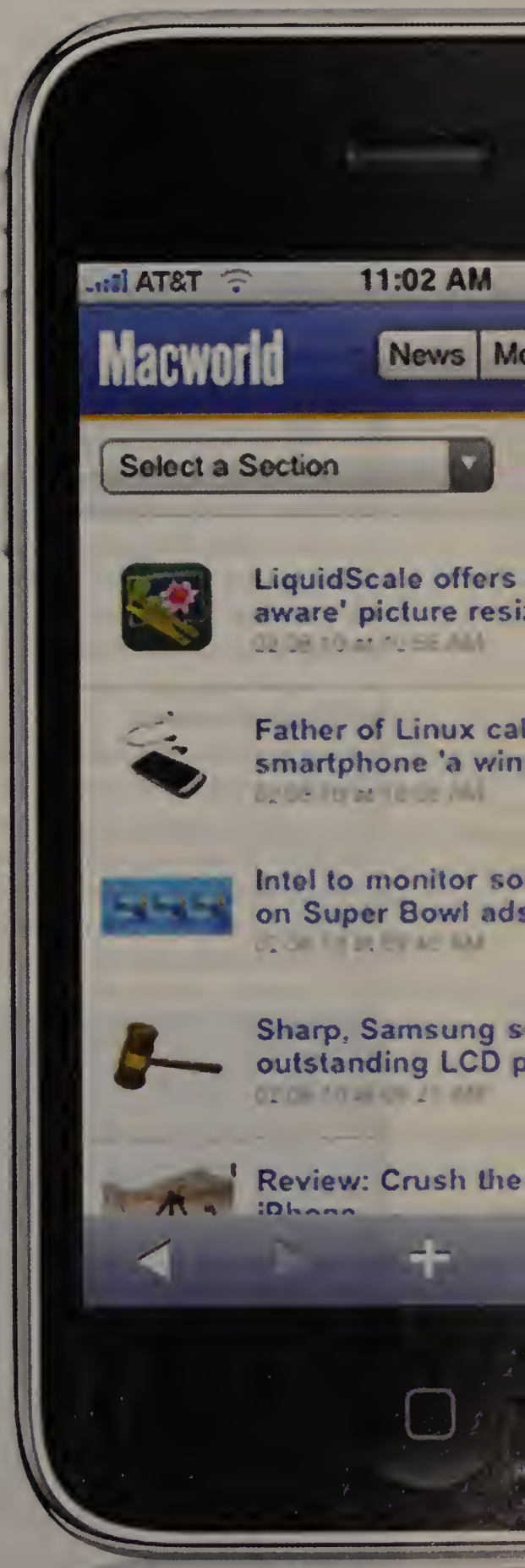


Maximize Your Dock Smarts

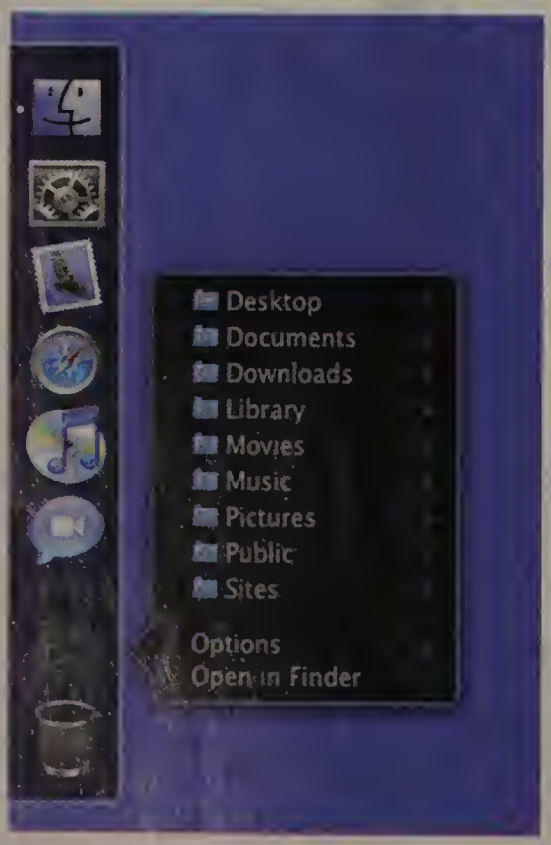
Ensure you're making the most of this basic OS X tool

BY KIRK MCELHEARN

Mac OS X's ever-present Dock can help you manage your applications and documents. But are you taking advantage of all the ways it can make your work easier? Here are some tips for using the Dock efficiently—whether you're quickly accessing files, folders, and applications or turning your tunes on and off.

Add What You Need

The Dock contains two sections: one for applications and the other for files, folders, and the Trash. If your Dock is at the bottom of your screen, you'll find applications to the left of the separator (the dashed line). Some icons stay in the Dock permanently. You can click on these to quickly access their programs. Likewise, you can drag a compatible file to an icon to open it in that program.



Easy Access to Folders With my home folder in the Dock, I can navigate all of its subfolders without going to the Finder.

You can drag any application from a Finder window to the Dock to add its icon. Want to remove an icon that's already there? Drag it off the Dock, and watch it disappear in a puff of smoke.

You'll also see icons for all applications that are currently running. (They appear with a bright dot beneath them.) These icons disappear from the Dock when you close the programs. If you want to keep an application icon in the Dock, click and hold on it, and then choose Options ▸ Keep In Dock.

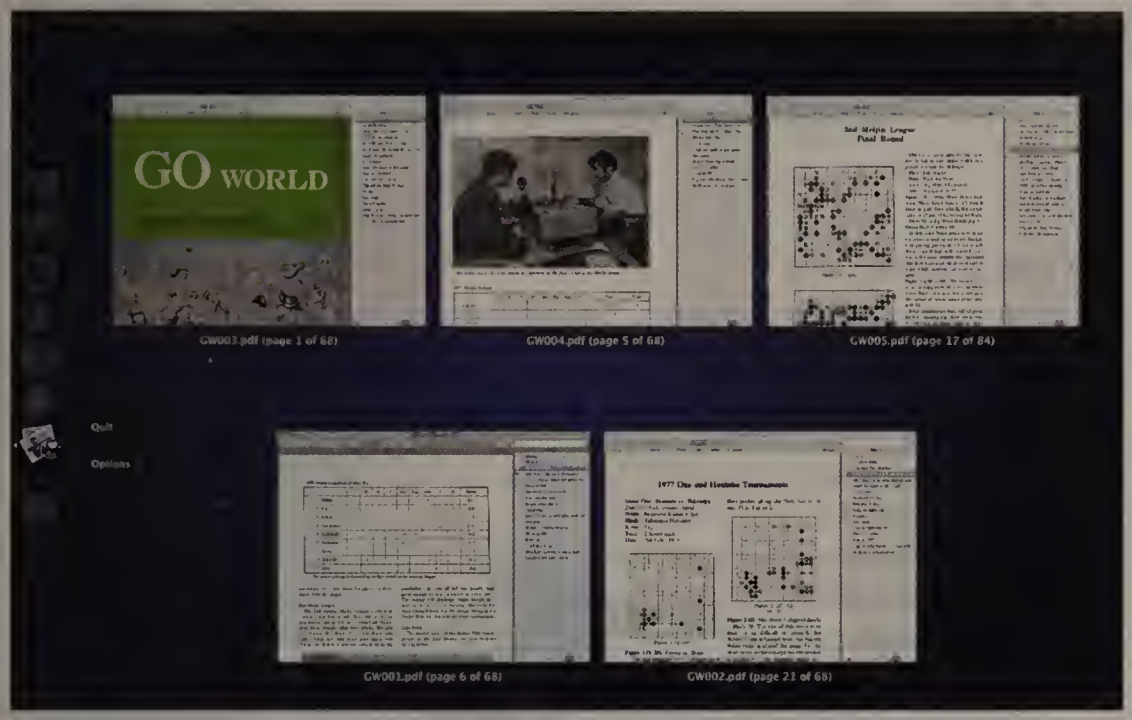
The other side of the Dock's separator holds files, folders, and the Trash. You can click on these items to get quick access to files you work with frequently—or even just for the duration of a project. Drag a file or folder to the right (or bottom, depending on where your Dock is on screen) section of the Dock. Wait a second for a space to open up, and then place the item where you want it. (The icon is just a pointer to your file; the original file does not move.)

Get Quick Access to a Folder

It's a cinch to add a folder to the Dock—just drag it there for easy access to the folder's files. Once the folder is in place, you have a number of options for how it displays. In Snow Leopard, the folder by default appears as a "stack" that contains a number of file icons piled one upon another. The folder can also display in grid mode, showing its contents as icons in a large pop-up menu when you click on the folder. But clicking a subfolder in grid mode opens only that subfolder; you can't then drill down into *its* contents.

If you want to navigate the subfolders, you can Control-click on the folder icon in the Dock and choose View Content As List. Now when you click the folder, its contents will display as a list in a pop-up menu. You'll see that the subfolders contain arrow icons to the right of their names. If you click one of the arrows, you can drill down into that subfolder's contents. Using list view, you can effectively navigate the hierarchy of any folder. For example, put your Documents folder in the Dock, in list view, and you'll be able to find and open any files it

ILLUSTRATION BY CHRIS WHETZEL



View Multiple Windows View multiple windows, just like in Exposé, and then click the one you want to go to.

contains without having to go to the Finder (see "Easy Access to Folders").

Store or Launch URLs

The Dock can also hold URLs—click on one of these icons (which look like @ signs atop springs), and your default Web browser will launch and open the Web page. This can be useful when there's a Web page you want to find without hunting through your bookmarks. To add a URL to your Dock, first open the Web page in your browser. Select the icon next to the URL in the address field, and then drag it to the Dock. Now you can access the page with a single click. If you store more than one URL this way, you might forget which @ sign corresponds to which Web page. No problem: Hover your cursor over the icon, and the full name of the page appears.

There's also a quick way to use the Dock to open a Web page when you come across a URL in a document. Select the Web page address (complete with the *http://* part) and drag it to the Safari (or Mozilla Firefox) Dock icon. The page will open automatically. (That's a quick way to open a Web page in a browser that's not your default.)

Access Exposé from the Dock

When you want to maneuver among your windows, you can use the Dock to click and bring an application to the fore. But if you're using Snow Leopard, there's another way that lets you view—and choose from—open windows in a version of OS X's Exposé.

Click and hold down your mouse button on a Dock icon. You'll see the window (or windows) of the program belonging to that icon against a dark background, (see "View Multiple Windows"). When you release your mouse button, the window(s) will stay on the screen. Click another Dock icon to see the window(s) for that application, then another icon, and so on. As you do this, you can examine the windows for all your active programs, and choose the one you want to see by clicking on it.

Hop to System Preferences

Do you need to change your desktop background or tweak your Energy Saver settings? It's easy to jump to any pane in OS X's System Preferences by using the Dock. Control-click on the System Preferences icon (it looks like a set of gears) and a list of preference panes will appear. Then simply choose the one you want and click on its name, and System Preferences will open to that preference pane.

Access Program Options

If you Control-click on a running program's Dock icon, you may find useful options in the contextual menu that appears. For example, if you Control-click on the iTunes icon when the program is running, you can choose Play, Pause, Next, Previous, and some other functions. If you Control-click on Word's icon, you get access to an Open Recent menu; its submenu lists the documents you've used recently. Try this with the applications you use most often, and you'll start realizing some of the Dock's real potential.

Senior Contributor **Kirk McElhearn** writes about more than just Macs on his blog, Kirkville (www.kirkville.com).

Synapse

These days, it's not uncommon to own a MacBook *and* an iPad, which makes single-device bags much less convenient. Tom Bihn's $120 Synapse (macworld.com/6156) is a compact backpack with versatility: Instead of a built-in padded sleeve, the Synapse includes a pouch for a removable iPad or laptop sleeve (13-inch or smaller). You can swap sleeves depending on the day's needs. The Synapse holds a surprising amount of stuff in its zippered compartments—including a liter water bottle in a well-balanced center pocket—but its small size and good ergonomics mean you won't overload it. It also makes a great day or hiking pack.—**DAN FRAKES**

Stand While You Work

Tired of sitting around all day? Perhaps it's time to ditch that desk chair.

BY LEX FRIEDMAN

For years I've spent all day long sitting in front of my trusty iMac. Has my professional life been shortening my actual one? After looking at yet another study with scary statistics about the effects of sedentary living on health, I made an impulsive decision to convert my workstation to a standing desk.

A Low-Cost Approach

My approach was decidedly low-tech. I used two shelf toppers from Ikea to elevate my screens to standing eye-level and I used a small folding tray table for my keyboard and trackball. I had to experiment with my equipment until I found a position that kept my forearms parallel to the floor, wrists straight, keyboard and mouse in close range, and so on.

To answer your question, yes: My legs got pretty tired. But I was surprised to discover that while my legs adjusted to the increased standing relatively quickly, the aching in my feet got worse each day. I started wearing sneakers, I bought gel inserts to boost arch support, and I bought an inexpensive "anti-fatigue mat." The combination finally soothed my tired feet. Mostly.

The Virtues of Variety

The other key for extended comfort while standing is adjusting position. I rotate through standing more heavily on one foot, leaning against the desk, or even resting an arm on the table my keyboard sits upon.

All that shifting around is a good thing: "Perhaps the greatest benefit of a standing workstation for computer work is the ability to change posture, which varies muscle activity [and] should reduce fatigue."

That's according to Paul Schwab, a board-certified ergonomist and the Ergonomics Program Manager for Texas Instruments. Via e-mail, Schwab expressed his preference for adjustable-height desks, over my fixed-height setup. A quick search will turn up oodles of (usually pricey) adjustable-height models from companies such as Anthro (www.anthro.com), Ergo In Demand (www.ergoindemand.com), Relax The Back (www.relaxtheback.com), and Steelcase (www.steelcase.com).

But, as Schwab says, "Even ardent proponents of standing workstations want to sit occasionally." That's the biggest weakness with my bare-bones setup. I have a tall stool I sit on for conference calls or when I just need a break.

Still, it seems I should find a way to sit a bit more during the day. I exchanged e-mail messages with Professor Alan Hedge, the Director of the Human Factors and Ergonomics Laboratory at Cornell University. He wrote: "Standing all day is associated with increased risks of back pain, varicose veins, foot pain and cardiovascular problems.... The best strategy is some of both."

Treadmill Desks At slow speeds, treadmill desks, such as Steelcase's Walkstation, let you keep muscles moving while typing or talking.

Adjustable Desks If you want to switch between standing and sitting, an adjustable desk like Steelcase's Airtouch may fit the bill.

Treadmill Desks

There's one more option that I'm eager to try: the treadmill desk, which is exactly what it sounds like. If you stick to walking about one mile per hour, it's reportedly possible to simultaneously use your computer or talk on the phone—burning extra calories all the while.

You can find plenty of treadmill desk kits online. There are treadmill-ready desktops you can place over a standard treadmill if you already have one. Alternatively, you can get a flat treadmill that slips under an elevated desk. The technology is there; the major barrier is the startup cost involved.

But even simply standing burns extra calories. Studies have shown standing and moving around more during the workday leads to slimmer waistlines.

Four Reasons the LaserWriter Mattered

Twenty-five years later, we look back at Apple's first laser printer

BY BENJ EDWARDS

Twenty-five years ago Apple released the LaserWriter, its first laser printer. Few today remember that Apple's hefty printing machine had as much of an impact on the way the world used computers as the Macintosh itself. The $6995 LaserWriter was part of a 1985 Apple marketing initiative christened the "Macintosh Office" that included a new network technology called AppleTalk, the printer, a file server, and a high-end Unix workstation. In light of this anniversary, here are four reasons the LaserWriter mattered:

1. It Assured Apple's Graphic Design Dominance

For the graphic designer in 1985, the Macintosh represented a quantum leap in the way one could dynamically manipulate graphics and text. But without a means to turn those designs into print, the Mac alone could be dismissed as a fancy toy.

Enter the LaserWriter, which allowed a user to print typography at an enormous range of point sizes in four professional fonts. No matter what the size, the text came out razor sharp on paper. In addition, the LaserWriter could output perfect curves, lines, and half-toned artwork anywhere on a printed page.

For the first time, a designer could mock up a complete page of text and graphics on a computer and then produce a quick professional hard copy without significant expense.

2. It Launched PostScript

The Apple LaserWriter was the world's first printer to use PostScript, a page-description language created by Adobe Systems. The genius of PostScript was in the way it could compress information. Apple's networking standard, AppleTalk, could push data at 230,400 bits per second. That was plenty fast enough to transmit PostScript code to the LaserWriter. Due to speed and memory concerns, Hewlett-Packard limited its first LaserJet to no more than six square inches of graphics per page—in other words, a 2-inch by 3-inch rectangle. The LaserWriter could output a full page of graphics at the user's discretion.

3. It Was the First Network Printer

If your office bought a $6995 printer (that's $14,090 in 2010 dollars), wouldn't you want to share it among employees? Apple thought so—which is why it designed the primary interface for the LaserWriter around its new AppleTalk networking standard. As a result, 30 to 40 Macs could share the same LaserWriter over Apple's low-cost computer network.

Unlike networked printers before it, the LaserWriter didn't have to be tethered to one computer. It wasn't until a full six years later, in 1991, that the HP LaserJet IIISi duplicated this network functionality for the first time on the IBM PC side.

4. It Empowered the Little Guy

For those of us who grew up with desktop publishing all around us, it's hard to fathom the trouble and expense people went to just to produce a single page of laid-out, pasted-up typography in the world before the LaserWriter. It took dozens of hours to typeset a single page of text in the 1970s and early 1980s. The machines that were involved—typically photo typesetters—sold for tens of thousands of dollars. With the LaserWriter and a Mac, one person could sit down, input text into a computer-designed page layout, and have a hard copy in a few minutes. The launch of the LaserWriter effectively marked the beginning of the desktop publishing era—the era in which virtually anyone could design and print professional-looking publications with a personal computer.

PRODUCT WATCH

HARDWARE

Lok-It Secure Flash Drive, from Systematic Development Group (www.lok-it.net): Portable flash drive comes with full PIN entry keypad on USB stick (4GB, $62).

WorkForce 520, from Epson (www.epson.com): Scan, copy, fax, and print with this all-in-one inkjet. Features 802.11b/g/n wireless networking, 10/100 ethernet, and USB 2.0 ($130).

SOFTWARE

TextFlow Desktop 1.0, from Nordic River (www.nordicriver.com): Compare Microsoft Word and Open Office files with this collaborative document editor ($99).

VPN Tracker 6.2.1, from Equinux (www.equinux.com): Virtual private network software can now be used with VPN devices from WatchGuard Technologies ($99, $129, and $269 versions).

REVIEWS

Hardware and Software for All Your Business Needs

HARDWARE

Dell 3330dn ▷

Dell's 3330dn monochrome laser printer may not look exceptional, with its compact footprint, low price, and rather basic feature set. But it offers impressive speed and print quality, plus plenty of connectivity and other ways to grow. The Dell printed 18 pages per minute (ppm) for plain text, and 4.3 ppm for a document with mixed text and color graphics (printed as grayscale). Text quality was perfect, but graphics quality was marred by noticeable banding and a limited midrange of grays that made round objects and shadowy areas look too dark or too flat. For a printer this fast, the 250-sheet standard input tray and 150-sheet output tray seem unduly small. You can add a 550-sheet input tray for $100. The 3330dn ships with a standard-capacity, 7000-page toner cartridge that, when purchased separately, costs $160—or 2.3 cents per page (macworld.com/6158).

●●●½; $599; Dell, www.dell.com

HP Officejet 6000 Wireless ▷

HP's Officejet 6000 Wireless color inkjet printer offers good performance and plentiful features, plus cheap inks. The Officejet 6000 Wireless ranked in the middle of the pack on most of our speed and quality tests. On the Mac, plain-text speed was 7.45 ppm, versus 1.47 ppm for a mixed text and graphics PDF file and 0.77 ppm for a full-page color photo. Text quality was just a hair shy of crisp. Color prints tended to have a more sepia or yellowish tinge, though they still looked natural. Our grayscale image seemed a little greenish and grainy. The inks are reasonably priced. Standard-size (HP 920) cartridges ship with the unit and will cost you 4.8 cents per black-ink-only page and 14.7 cents per full-color page. This is a good inkjet printer for small offices on a budget with low- to mid-volume printing needs (macworld.com/6159).

●●●½; $120; Hewlett-Packard, www.hp.com

Iomega iConnect Wireless Data Station ▷

Do you have lots of USB storage devices lying around that you wish you could access across your home network? For a very reasonable $100, Iomega's iConnect will let you do that and more, with up to four drives. The iConnect is basically a network-attached-storage (NAS) box without drive bays. It has a DLNA Certified UPnP media server for streaming music and video across the network, handles bit torrents, and even allows you to attach printers and cameras to any of its four USB ports. The iConnect offers wireless connectivity, but that feature is disabled by default; to enable it, you must initially connect via the gigabit ethernet port. Setting up a Time Machine backup is a bit tricky. Initially, none of the drives we attached to the iConnect could be used for Time Machine backups; we first had to enable a single drive via the backups tab in iConnect's browser. If you don't need remote FTP access, the iConnect is a great way to get started with network storage and media serving (macworld.com/6160).

●●●½; $100; Iomega, go.iomega.com

Oki C610dtn ▷

Oki's C610dtn color LED printer offers good performance and economy. In our tests, it printed text at a pace of 17.2 ppm. A four-page PDF file of mixed text and graphics and a full-page color photograph each took around a minute to finish. The C610dtn ships with starter-size, 2000-page cyan, magenta, yellow, and black toner supplies. Based on Oki's estimates, printing in black costs 1.1 cents per page. A four-color page would cost just 9 cents—a bargain. These economical consumables are a highlight, but the printer does have its drawbacks. For starters, the installation process is tedious and confusing. The setup guide's instructions for the Mac are outdated and peppered with factual errors. Oki says that updated documentation should be available online soon. Given its reasonable purchase price, speed, and affordable consumables, this printer could serve most small or medium-size workgroups competently (macworld.com/6161).

●●●; $699; Oki Data Americas, www.okidata.com

SOFTWARE

Less Accounting △

Less Accounting is the only Web-based application that offers a complete set of accounting tools and the basic set of features necessary to run a small business. You can choose one of five package options, ranging from a basic free account to a $3600-per-year account that provides an actual human bookkeeper who

Find It Online

For expanded reviews, type the blue URL at the end of each summary into your browser's address bar.

manages your business finances. Less Accounting offers a wide array of accounting and business features similar to those found in many desktop-based business accounting packages. Unlike many Web-based apps in its category, Less Accounting's free entry-level package offers a surprisingly versatile set of features that don't feel stripped down or limited in any significant way; and each paid package offers enough value to justify the additional expense. The one thing limiting Less Accounting's value, however, is its lack of inventory options (macworld.com/6162).

4½; free to $300 per month; Less Everything, www.lessaccounting.com

Virtual TimeClock '10 Network Edition △

Virtual TimeClock '10 makes it easy for you to centralize your business's time clock. You can use it to gather and export time reports and then send them to a payroll application. Virtual TimeClock can operate across a wide-area network (WAN) and support your workforce whether they're working on Macs or PCs. Despite some user-management limitations, Virtual TimeClock is a stellar time-clock application, and this new version offers dozens of options for customizing the way you control, collect, and report your employees' work, vacation, leave, or other benefit time. Virtual TimeClock Pro offers several different customizable reports and detailed individual time cards. Virtual TimeClock '10 offers small and large businesses a powerful tool for collecting employee's time information using existing computer hardware and without requiring them to invest in hardware-based time-clocks (macworld.com/6064).

4; server, $295; $50 per client (package pricing available); Redcort Software, www.redcort.com

Top Products YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

HARD DRIVES Desktop

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
iStoragePro iT1 Dock (pictured) www.istoragepro.com	4	$329 (2TB)	quad interface	S843
Rocpro 8SO www.rocstor.com	4	$139 (500GB)	quad interface	5397
VR Mini www.caldigit.com	4	$699 (1TB)	quad interface	S396

HARD DRIVES Portable

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
iStoragePro Pocket iT1PKT72320 www.istoragepro.com	4	$259 (320GB)	dual interface	5808
Mercury On-the-Go (pictured) www.macsales.com	4½	$180 (320GB, 7200 rpm)	triple interface	4258
Starck Mobile Hard Drive www.lacie.com	4	$100 (320GB)	USB-only	5608

MONITORS Widescreen

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
324 LCD (pictured) www.lacie.com	4½	$828	24-inch display	3896
LP306S www.hp.com	4	$1215	30-inch display	2509
SyncMaster 2233SW www.samsung.com	4	$120	21.5-inch display	S900

PRINTERS Laser

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
C544DN www.lexmark.com	4½	$398	LED, color	43S6
Dell 5130cdn (pictured) www.dell.com	4½	$1549	LED, color	6009
HL-4070CDW www.brother-usa.com	4½	$336	PostScript-compatible	338S

PRINTERS Multifunction

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Artisan 810 (pictured) www.epson.com	3½	$300	inkjet	5916
Color LaserJet CM1312nfi www.hp.com	4	$349	laser	S183
LaserJet M1319f www.hp.com	4	$195	laser, monochrome	5480

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

BUSINESS CENTER

News and Analysis about Macs in the Workplace

Fuze Box Amps Up Web Conferencing

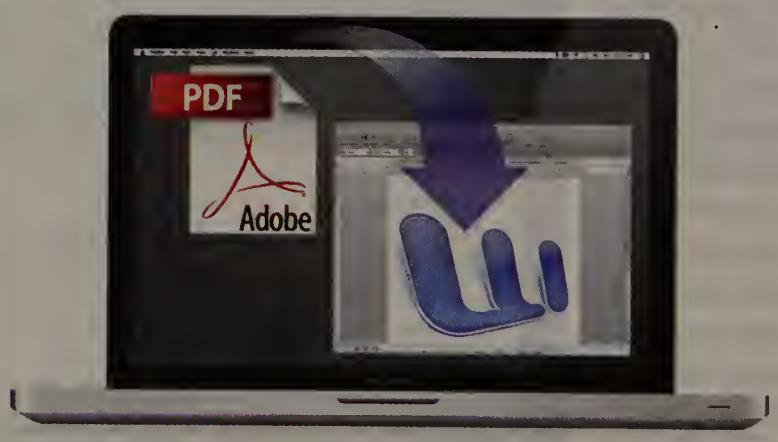
Since launching its service last year, online-conferencing service provider Fuze Box has taken on rivals WebEx and GoToMeeting with lower pricing and a no-client Web interface. The latest version of Fuze Meeting (www.fuzemeeting.com) ups the game by improving existing features and adding new ones.

One new feature is meeting replay: After your meeting is over, you can download a full recording of it, including all shared content. Also, Fuze Meeting's interface has been revamped with an eye toward simplifying it. The fetch feature has been expanded to cover groups—so multiple attendees can dial in at once. Fuze Meeting has also gained a new iPhone app and better international support (global conference numbers, French language compatibility, and support for Skype-In calls).

Fuze Box claims its service supports higher-resolution graphics than its competitors, making it particularly good for creative professionals. Fuze Meeting offers three monthly plans: Personal ($29 a month, a maximum of 25 attendees at a time, and 2GB of online storage); Plus ($49 a month, 45 attendees, and 10GB of storage); and Pro ($69 a month, 55 attendees, and unlimited online storage). By comparison, GoToMeeting costs $49 a month with a maximum of 15 attendees, and WebEx starts at $49 a month for a maximum of 25 participants. Fuze Box also offers a daily plan: For $9.99, you can hold as many meetings as you want within 24 hours, with up to 15 attendees each.—DAN MILLER

FileMaker Updates Free Productivity Kit

FileMaker has updated a collection of free tools and templates designed to help users of its database product streamline their business processes. The FileMaker 11 Pro Business Productivity Kit (www.filemakertrial.com/bpk) comes in two versions: a Standard Edition designed for companies that sell physical merchandise, and a Service Edition for companies, like consulting firms, that deal primarily in intangible products. Both editions contain templates designed to work with the recently released $299 FileMaker Pro 11 (4½; macworld.com/5999). These templates facilitate business tasks, from organizing contacts and suppliers, and managing invoices and payments, to sending targeted e-mail campaigns. In addition, the kit includes several tools that take advantage of FileMaker's functionality to provide features such as on-the-fly reporting, charting, and search. The release of the Productivity Kit comes on the heels of the recently introduced Bento 3 Family Organizer (www.bentotrial.com/bfo), a similar free kit of templates aimed at organizing family activities and designed for the company's consumer-oriented Bento 3 (4; macworld.com/5612) database program.—MARCO TABINI



Solid PDF to Word Converter Debuts for Mac

Solid Documents, maker of PDF and document tools for Windows, has released a Mac version of one of its most popular products: Solid PDF to Word. Solid PDF to Word for Mac (www.mac-pdf-converter.com) is a document-conversion tool that transforms PDF documents into Microsoft Word and Excel formats. Contrary to its name, the program can also convert PDFs to Apple's Pages format, rich text format (RTF), and even HTML. The conversion preserves all text, images, tables, headers, footers, and page layouts, and converts editable form fields to text boxes (when converting to compatible formats) for easy interaction. Batch conversion is also on the bullet list, making Solid PDF to Word for Mac a great option for the workplace. Solid PDF to Word for Mac requires an Intel Mac running Mac OS X 10.5 (Leopard) or later. A trial version is available, as are a number of multiuser site license packages. A single-user license is $80, while 2 to 4 licenses are $75 each, 5 to 9 licenses are $70 each, and so on.—DAVID CHARTIER

Drive Genius 3

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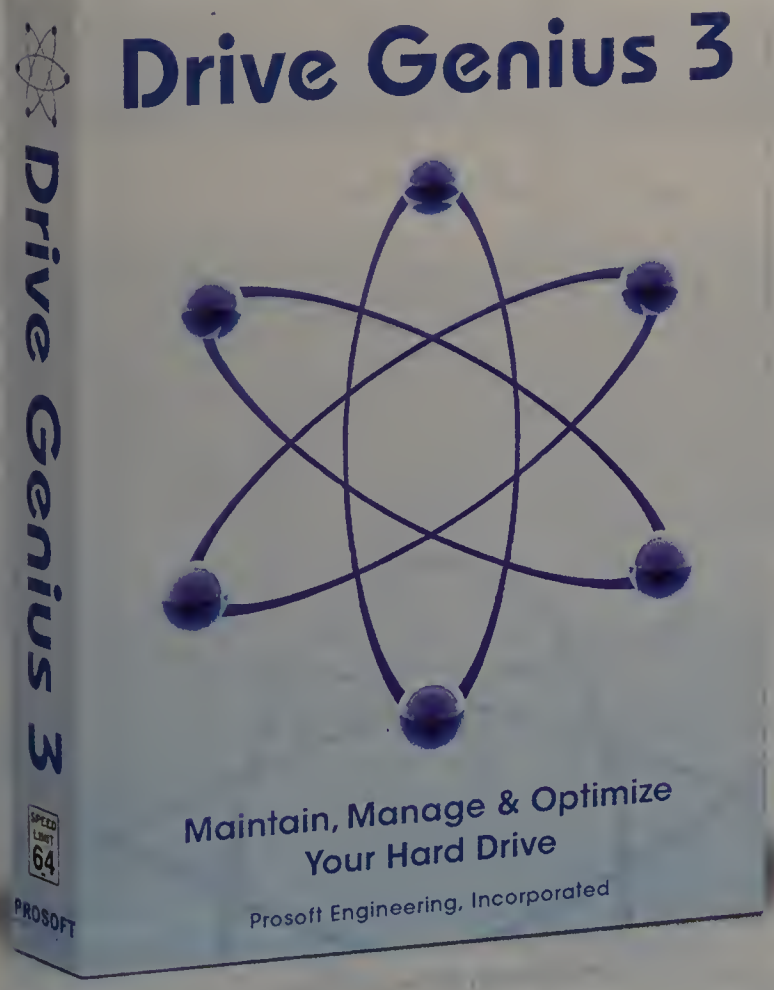

SHIPS ON BOOTABLE DVD!

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Monitors the overall health of your drive, alerting you to possible issues before they become major problems.

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Runs as a 64-bit application on Mac OS 10.6 or later with a compatible 64-bit processor.

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Provides even better defragmentation of your files and even more fragmentation information in a new user interface.

RAID Support
Support for hardware RAID and Apple's software RAID.

Enhanced Repartition
Add, delete, hide, expand or shrink OS X partitions so you can organize your drive more efficiently.

Scan
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Email Notifications
E-mail notifications can be sent when long-running tasks complete and you are away from your computer.

DRIVE GENIUS 1 & 2 AWARDS!!!

Mac|Life Editors' Choice · 2009 iCreate Best in show · Mac Format Choice ★★★★★ · MacUser · MacWorld Awards 2007 Nomination · MacWorld Awards 2008 Nomination · Macworld Editors' choice ★★★★★ · Macworld

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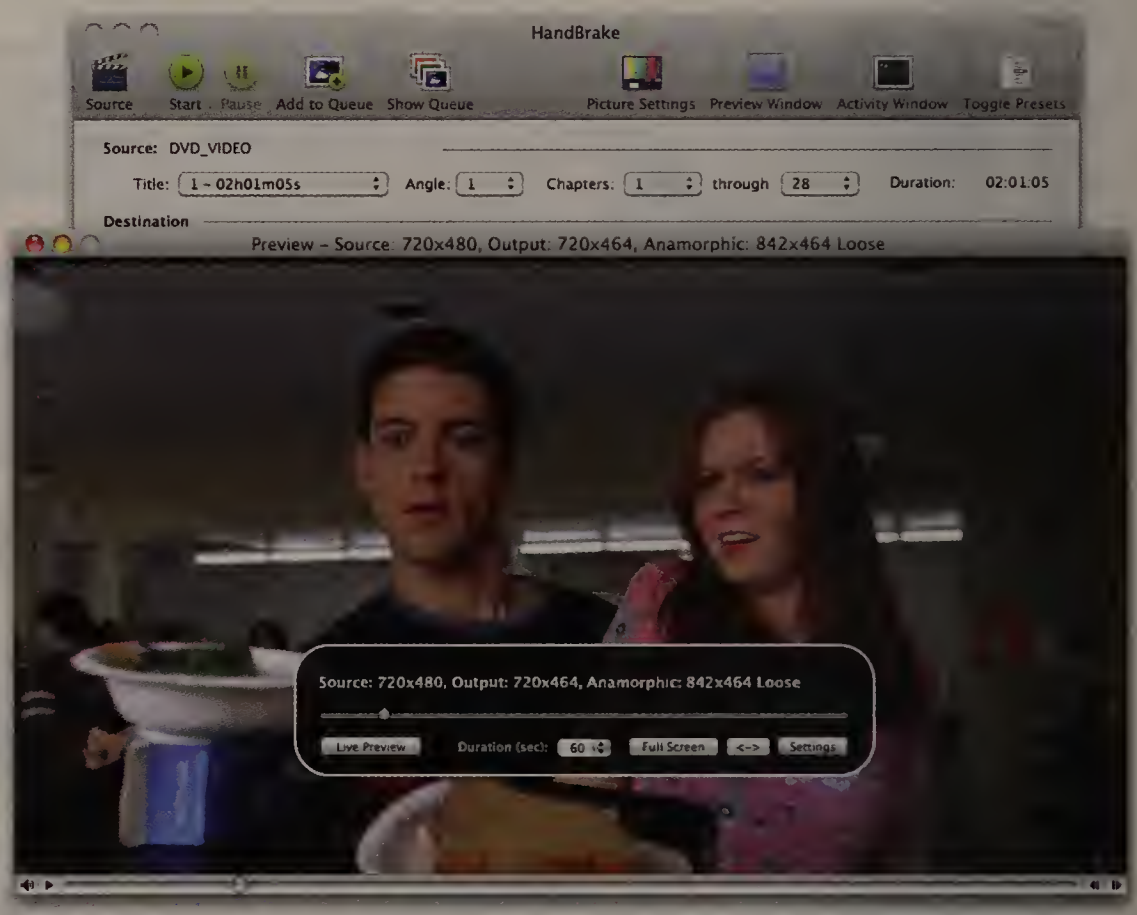
DVD Ripper Boot Camp

If you're going to back up or convert your own DVDs, which software should you use?

BY CHRISTOPHER BREEN

Replacing beloved DVDs that have become scratched, covered in jam, or chewed on by a teething two-year-old is a bother. (More of a bother is if one of those discs is no longer available for sale.) Fortunately, a variety of applications let you create digital copies that are playable on your Mac. We gathered some of the most popular of these apps and put them through their paces in the hope of finding the best performers.

Editor's note: The MPAA (Motion Picture Association of America) and most media companies argue that you can't legally copy or convert commercial DVDs for any reason. We (and others) think that, if you own a DVD, you should be able to override its copy protection to make a backup copy or to convert its content for viewing on other devices. Currently, the law isn't entirely clear one way or the other. So our advice is: If you don't own it, don't do it. If you do own it, think before you rip.



Can't Compete with Free HandBrake remains one of the best choices available to Mac users who want to convert the content on their DVDs for viewing in others formats—and it's free. RipIt can step in to decrypt and make DVDs ready for HandBrake, when necessary.

The Applications

I tested five applications: the free 64-bit version of HandBrake 0.9.4 (★★★★½; macworld.com/6187), MacTheRipper 4.0 (www.ripdifferent.com), The Little App Factory's $20 RipIt 1.4.3 (★★★★; see page 16), DVDSuki Softwares' $10 Mac DVDRipper Pro 1.5.5 (★★★½; macworld.com/6188), and iSkysoft Studio's $39 iSkysoft DVD Ripper 1.9.8 (★★★; macworld.com/6189).

Note that obtaining MacTheRipper requires a rather convoluted process and making what the developers call a "gift" to gain access. As such, we've decided to not rate it.

HandBrake and iSkysoft DVD Ripper not only strip commercial DVDs of their copy protection (HandBrake can do this only if the VLC media player is installed on your Mac), but they also convert the resulting videos to other formats—ones compatible with an iPod, iPhone, iPad, or Apple TV, for example. MacTheRipper and Mac DVDRipper Pro simply create decrypted archives playable on your Mac with Apple's DVD Player application or another application capable of playing content housed in VIDEO_TS folders. RipIt similarly creates decrypted archives, but version 1.4 introduced a beta Compress feature, which allows you to also create movies at one of five settings—High Quality MP4, Apple TV, iPhone/Touch, XBox360, and PS3.

Testing, Testing

I tested the five applications with two DVDs— Disney/Pixar's *Wall-E* and disc one of the first season of HBO's *Six Feet Under*. I chose *Wall-E* because Disney is one of the studios that uses a copy-protection scheme that makes it hard for a ripping tool (or user) to identify the main feature. The *Six Feet Under* disc doesn't use this type of protection, but, like other TV-compilation discs, it does contain multiple episodes. I chose this disc to see which of the applications could extract individual episodes.

I conducted the tests on a quad-core 2.66GHz Mac Pro with 8GB of RAM, running Snow Leopard.

The Basics and Beyond

The range of capabilities of these applications is fairly broad. On the Incredibly Simple end, you find RipIt, which provides just two interface options—Rip and Compress.

Mac DVDRipper Pro is similarly simple. It rips only the entire disc—offering no feature or episode extraction. It can rip a disc either as a DVD Player archive or as a .iso image file.

MacTheRipper lets you remove region coding (the scheme that restricts DVDs to geographical region). It can also seek out a DVD's main feature and chapters. It shows you all available features and lets you select the one you want. Although you can select individual episodes, it doesn't allow you to add multiple episodes to a queue.

iSkysoft DVD Ripper can't perform a full-disc extraction that results in a VIDEO_TS folder. Rather, you must choose to extract and convert just the main feature, combine all of the DVD's movies into a single video, or extract individual movies from the DVD.

HandBrake is also designed to extract and convert a disc's features and episodes rather than the entire DVD. It offers far fewer conversion presets than does the iSkysoft application, but the ones it does offer are useful. You can tweak each preset and manipulate the quality of the resulting video. You can also add episodes to a queue, making it easy to rip a disc's worth of TV shows with one click rather than ripping each episode individually.

Conclusions

Of the decrypting tools, RipIt has the advantage in that it's dead simple to use and is capable of ripping just about any disc you throw at it. I've yet to experience a failure with it.

Of the apps that can also convert DVD video to other formats, there's no contest between HandBrake and iSkysoft DVD Ripper. HandBrake is clearly the better tool. It's free, provides more advanced options, and produces better-looking results, even when you use its default settings.

Talk to Your iPod: Inside Apple's Voice Control

BY KIRK MCELHEARN

The Voice Control feature in the iPod touch (3G, late 2009) and iPhone 3GS lets you use the included Apple earbuds with remote and mic (or compatible earbuds or headphones) to tell your iPod or iPhone what to do—what to play, when to change tracks, and when to shuffle. On top of that, the iPod touch can talk back, telling you the names of tracks that are playing if you're not sure what you're listening to. Here's how to use the feature.

Talk It Up

To activate Voice Control, press and hold the center button on the remote for about three seconds, or press and hold the Home button on the iPod or iPhone. You'll hear a beep in the earbuds, and see the Voice Control screen show up on the display.

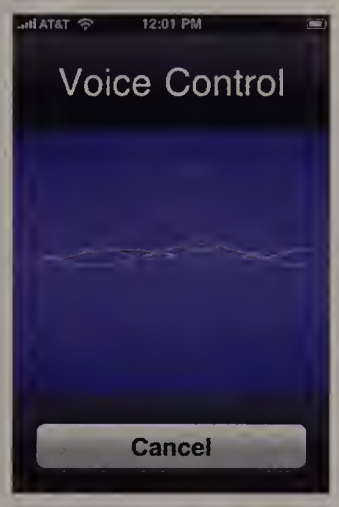
You can tell your iPod or iPhone to play something for you. For example, say 'play' and then either 'album,' 'artist,' or 'playlist,' followed by the name of that item. For example, if I say 'Play playlist Beatles,' my iPod tells me it's going to play my Beatles playlist, and then starts playing the playlist.

If I say 'Play artist Grateful Dead,' it plays songs by the Grateful Dead; it plays albums alphabetically (one *Macworld* editor had some issues with stray albums playing out of order) and each album's tracks chronologically.

If I want to play an album, I just say 'Play album *The Joshua Tree*,' for instance. Note that you can't tell it to play audiobooks, podcasts, iTunes U content, or individual songs.

The voice recognition is fairly good, but you'll definitely encounter some mistakes. You need to speak an artist's entire name, which can be bothersome with long names. And it's not very well suited to classical music: I asked my iPod to 'Play artist Quatuour Ebène,' and it replied, 'Playing songs by Leftover Salmon.'

What Am I Listening To?



When I'm listening to music and don't know exactly what I'm hearing, I can ask my iPod touch to tell me. I just say, 'What's playing?' or 'What song is this?' to hear the song's name followed by the artist's name. This interrupts what you're listening to, of course; when you press and hold the button on the earbuds, the music fades away as the voice control feature comes in.

Become a Genius

If you want to make an instant Genius playlist, you can also say 'Genius,' 'Play more like this,' or 'Play more songs like this.' This whips up a Genius playlist from what's on your device, and starts playing the "based on" song again. The monotonous voice on the iPod or iPhone will tell you that it's 'Playing Genius playlist based on *song name* by *artist name*.'

Playing with Playlists and More

You can do a bit more, such as shuffle the current playlist (say 'shuffle') and skip ahead or back ('next song' or 'previous song'). You can also pause the music ('pause'), but I've found this to be unreliable. However, there's really not much use for these commands, other than shuffle; since you can pause by just pressing the center button on the remote, and skip to the next song by pressing the button twice quickly, it's a lot more work to invoke Voice Control for these features.

The Big Question: Why?

If you're out exercising, are visually impaired, or just want to keep your iPhone in your pocket or purse, you may find Voice Control to be very useful.

Send Audio and Video to Your iPad

BY KIRK MCELHEARN

While the iPad is a great device for listening to music or watching movies and TV shows, one feature that it's missing is the ability to accept streaming music and video from an iTunes library on your computer.

Given that the iPad doesn't have a great deal of capacity—especially the 16GB entry-level models—the ability to stream could come in handy. You may want to stream music to listen to while you're reading a book, without having to worry about exactly what music you last added to the iPad from your plentiful iTunes library. Or you may want to watch a movie stored on your Mac. As the saying goes, there's an app for that—more than one, actually.

For starters, there's what you might call "passive" streaming of music from an iTunes library to the iPad. You can use Rogue Amoeba's $25 Airfoil (★★★★½; macworld.com/3688) in conjunction with the company's free Airfoil Speakers app (while not yet optimized for the iPad, you can run it in pixel-doubled mode). You're limited, though, to streaming from your Mac, and you can't choose what to listen to from the iPad itself.

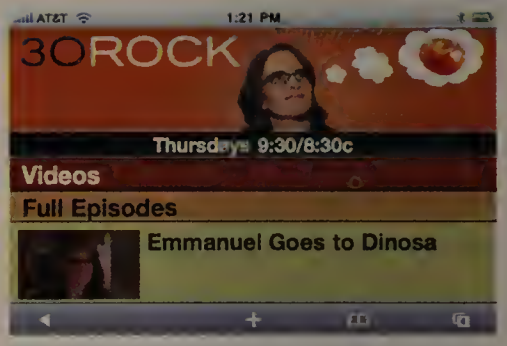
But streaming both music and video is clearly something that interests developers. Two $3 iPad apps provide this functionality, in similar fashion, by creating a local server on a computer (Mac or Windows) and an app on the iPad to play the music or video: Matthew Gallagher's StreamToMe (macworld.com/6236) and InMethod's Air Video (see page 43; there's also an Air Video Free [macworld.com/6237] version that limits the number of displayed items in each folder). Both apps require free server apps that you need to install on your computer. You can share your entire hard drive, just your Music and Movies folders, or, if you're going to let a child watch videos on the iPad, a specific folder of your choosing.

With StreamToMe, you download the ServeToMe application (projectswithlove.com/streamtome), launch it, choose which folders to share, and then just leave it running. StreamToMe is good for video—though it can't stream protected video files from the iTunes Store—but not so much for music. You can't choose playlists, and you can't even play the contents of a folder. If you play one song, the program stops afterward and awaits your next selection. However, as far as videos are concerned, it plays all the main video formats (including some that iTunes can't), as well as MP3, unprotected AAC, and FLAC music files.

Air Video uses a program called Air Video Server (www.inmethod.com), which works only for videos. Like ServeToMe, it lets you choose shared folders, but also lets you add iTunes playlists, though this feature is buggy. Air Video supports many video formats, but doesn't play protected iTunes Store videos. It does, however, offer on-the-fly conversion on your computer so that the iPad won't have to do so much work, and individual settings for quality, resolution, and zoom for each video.

I'd still like to see Apple provide a way to tap into my iTunes library, especially for listening to music while I read. But these apps' ability to work with formats that Apple doesn't support make them good choices for people who want to watch videos on their iPads right now.

Air Video The Air Video interface on the iPad offers more options than StreamToMe.



Studios and Mobile Video: What Now?

BY DAVID CHARTIER

Inspired in part by the iPhone's success, the major TV and movie studios are ramping up to go mobile in so many ways, you might have to sit down to catch your breath.

According to the Nielsen Company, 17.6 million people in the United States watched video on their phones during the fourth quarter of 2009, up from 11.2 million the year before.

Netflix and ABC made big splashes with streaming video on the iPad, while rumors abound of Hulu arriving on the iPhone and/or the iPad soon.

Interestingly, no one seems to have a very good idea of how to make money on pocketable mainstream content. Flo TV, for example, says that few people are buying into its paid plans, which start at just $10 per month.

The iTunes Store stocks more than 55,000 episodes from more than 3000 shows, but there's still a lot missing. Plus, not everyone wants to buy entire seasons or pay $2 to $3 per episode, and Apple's reported negotiations with the studios for cheaper $1 TV episodes or $30 TV subscription plans seem to have stalled. Network streaming sites like ABC's are great, but the selection is scattered and the back catalog is limited.

Video is going mobile in a big way. But the studios need to figure out whether subscriptions, à la carte pricing, advertising, or some mixture of the three will generate the revenue they need to make mobile video a viable business.

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REVIEWS

Home Entertainment Hardware, Software, and Accessories

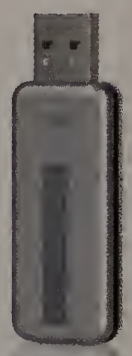
HARDWARE

Digital Group Audio Livespeakr △

The Livespeakr is an undeniably clever portable speaker system. The removable cradle—which fits all current models of the iPhone and iPod touch—can rotate within the dock itself, letting you listen with your iPhone oriented in either portrait or landscape mode. It's not a dock-connector system, however (macworld.com/6190).

●●●; $80; Digital Group Audio, www.livespeakr.com

Elgato EyeTV Hybrid (2010) ▷



The latest version of Elgato's EyeTV Hybrid TV tuner lets you access over-the-air SD and HD channels (ATSC) and unencrypted analog (NTSC) and digital (Clear QAM) cable channels, as well as signals from cable and satellite boxes, on your Mac. If you're hoping to use it with your cable or satellite box, however, be prepared for a complicated process and the fact that you can't get HD quality (macworld.com/6191).

●●●½; $150; Elgato, www.elgato.com

iHome iA5 ▷

The iHome iA5 alarm clock and its software partner, the iHome+Sleep iPhone app, aim to help you get the best sleep experience possible, using everything from integration with your iPhone's music library to keeping stats about your sleep habits. The lack of a radio is a bit of a bummer, especially if you like to have a bedside device that does everything (macworld.com/6192).

●●●●; $100; iHome, www.ihomeaudio.com

Kanex XD ▷

If you own a 27-inch iMac and want to make use of its screen to play console games, watch Blu-ray movies, or enjoy HD TV shows from a cable box or DVR, the Kanex XD HDMI to Mini DisplayPort connector can make it happen (macworld.com/6193).

●●●●; $150; Kanex, www.kanexlive.com

Klipsch ProMedia 2.1 Wireless ▷

Wireless functionality aside, the ProMedia 2.1 Wireless speaker system is basically identical to the Klipsch's venerable ProMedia 2.1. And that's a good thing, especially if you want power and bass kick. But if you don't need to stream your computer's audio across the room, the wireless feature will have limited appeal (macworld.com/6194).

●●●●; $199; Klipsch, www.klipsch.com

SOFTWARE

Bongiovi Acoustics Digital Power Station (DPS) for iTunes

This plug-in aims to optimize the sound you get from iTunes. If you listen to a lot of music or watch a lot of movies and TV shows in iTunes, DPS's sound optimization can make the experience a more pleasurable one (macworld.com/6070).

●●●●; $30; Bongiovi Acoustics, www.bongioviacoustics.com

Equinux SongGenie 2

SongGenie is a great tool for helping you get the right information into your music files—both tags and lyrics. It will certainly improve the tidiness of the files in your iTunes music library (macworld.com/6195).

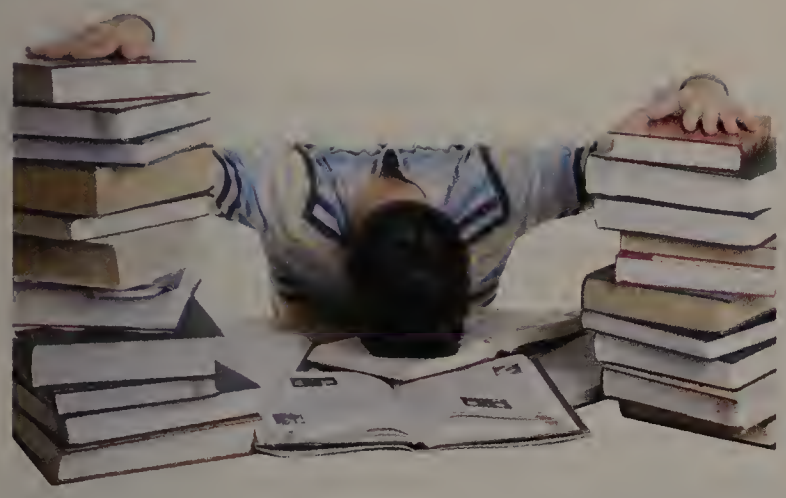
●●●●; $30; Equinux, www.equinux.com

iPods: Current Lineup

PRODUCT	SPECS	RATING	PRICE[A]	DISPLAY	PERFORMANCE	FIND CODE[B]
iPod Classic	160GB	●●●●	$249	2.5-inch color	36 hours of music playback; 6 hours of video playback	5262
iPod Touch	8GB	●●●●	$199	3.5-inch color	30 hours of music playback; 6 hours of video playback	3864
	32GB	●●●●½	$299	3.5-inch color	30 hours of music playback; 6 hours of video playback	5257
	64GB	●●●●½	$399	3.5-inch color	30 hours of music playback; 6 hours of video playback	5258
iPod Nano	8GB	●●●●½	$149	2.2-inch color	24 hours of music playback; 5 hours of video playback	5363
	16GB	●●●●½	$179	2.2-inch color	24 hours of music playback; 5 hours of video playback	5364
iPod Shuffle	2GB	●●●	$59	none	10 hours of music playback	5267
	4GB	●●●	$79	none	10 hours of music playback	5268

[A] All prices are Apple's prices. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

CIRCUS PONIES



Needs NoteBook

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Class notes. Rough drafts. Web research. Outlines. Reminders. Take control of it all with Circus Ponies NoteBook, the award winning application for managing information. Get organized using a familiar notebook interface, with pages and tabs, sections and subsections. Create voice-annotated notes and review them from your computer or iPod. Drop in lecture slides and mark them up with text, diagrams and sketches. "Clip" web pages to your Notebooks for later reference. Find anything instantly using NoteBook's patented Multidex™. Share your Notebooks as PDFs or as websites. And much more. NoteBook has everything you need to get organized for school.

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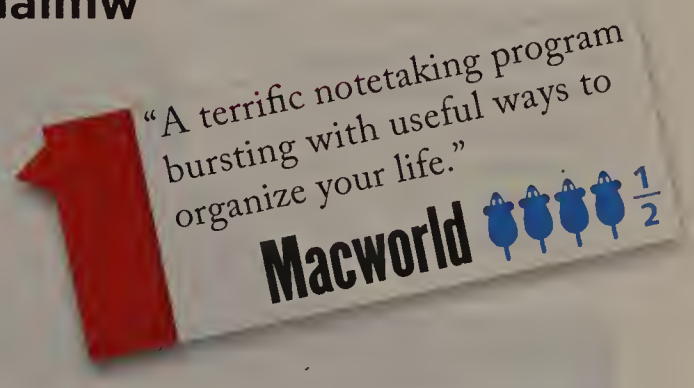

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NoteBook

The easy way to get organized on the Mac™

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Macworld HOT STUFF

What We're Raving about This Month

Grace Digital Solo

The $125 Solo Wi-Fi Receiver is an Internet radio tuner and streamer that provides access to more than 18,000 streaming radio stations and 35,000 podcasts and on-demand programs.

Connect it to a stereo or to powered speakers, and you can enjoy streaming audio using 802.11g from Pandora, Sirius Premium Internet Radio, Live365, iheartradio, NPR, and more. It can store up to 110 stations and has an adjustable four-line, backlit LCD screen for viewing your selections, adjusting your audio settings, or displaying song title and artist details. You can also stream music directly from your Mac.

The Solo comes with a standard remote control, but with a free iPhone app (macworld.com/6238) you can control the Solo's (or any other Grace radio's) volume, turn it on or off, find stations and create presets, or set one of up to five alarms from anywhere in the house (www.gracedigitalaudio.com).—**JONATHAN SEFF**

Scosche's New IDR Earphones

Scosche Industries has added four new earphones to its IDR line, all of which feature the company's proprietary tapLINE II Remote and Mic. The additions include the IDR655m ($100), the IDR355m and IDR355md ($55 each), and the entry-level IDR305 ($40, sold only at Apple Stores). For these new models, Scosche moved the built-in controls to where the wires fork, making it easier to locate the controls when you wish to switch tracks or adjust volume. The integrated mic also sits higher up on the right channel, putting it closer to your mouth and thus improving clarity (www.scosche.com).—**DAVID DAHLQUIST**

Rotten Tomatoes on the iTunes Store

Planning your movie night just got a little easier. The iTunes Store now displays reviews excerpted from Rotten Tomatoes' Tomatometer. Rotten Tomatoes (www.rottentomatoes.com) has long been famous for its review aggregation; now, quotes from four choice Top Critics' Reviews will appear for most movies that are available on the iTunes Store. Each review is marked by a tomato ("fresh") or a green splatter ("rotten") in addition to denoting the percentage of the reviews that are positive, just in case you don't want to read the entirety of the quotes. Ratings work in iTunes and when you use the iTunes app on the iPhone, iPod touch, and iPad (www.itunes.com).—**SERENITY CALDWELL**

Sonos Stereo Pair Feature

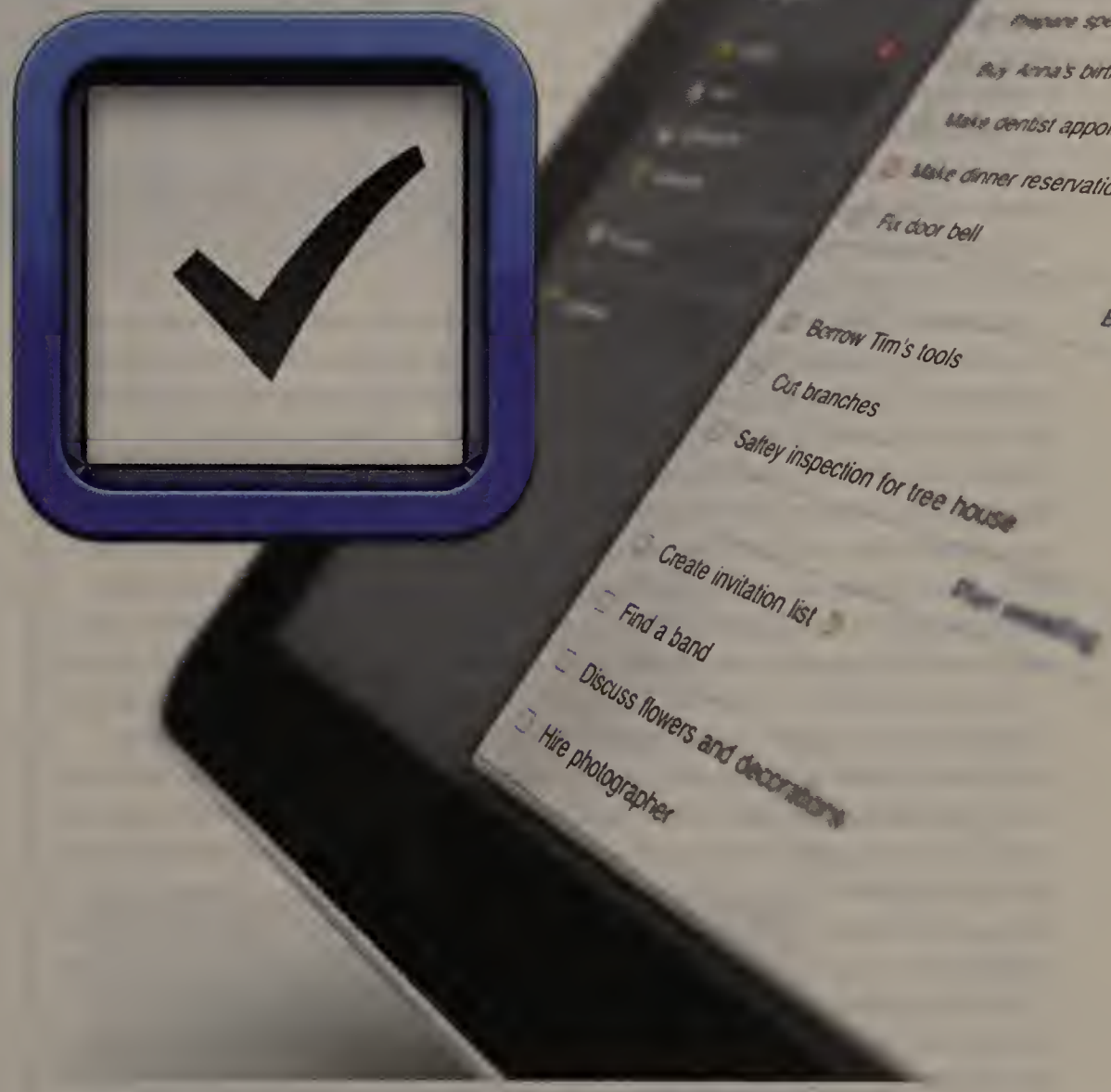
Sonos, maker of the Sonos Multi-Room Music System and the popular ZonePlayer S5 powered speaker units, recently released Sonos System Software 3.2, a free update that adds a variety of new capabilities to Sonos systems. Most intriguing to me is a feature called S5 Stereo Pairing. With it, you can configure two $399 S5s so that one acts as the stereo left channel and the other serves as the right channel. I tried it out, and having two S5s separated by several feet is a completely different experience. It's a rich sounding unit to begin with—providing plenty of bass and a crisp top end—and having two completes the picture (www.sonos.com).—**CHRISTOPHER BREEN**

AERIAL7 PHOENIX HEADPHONES

Design-conscious headphone maker Aerial7 has introduced the $60 Phoenix line of DJ-grade headphones, which come in four different color schemes (and should be available by the time you read this). These solid but compact headphones feature a fully collapsible frame and padded headband for extra comfort. While not as bulky as larger, studio-grade headphones, these midsize cans are designed to offer comparable sound quality, and feature a 44mm driver that should cover your low-end frequencies admirably. The headphones have a built-in microphone that you can use with your iPhone, and Aerial7 includes a Skype adapter so you can make Voice-over-IP calls on your Mac. The Phoenix uses an iPod-friendly 1/8-inch plug, but a 1/4-inch adapter is included for use with pro audio devices (www.aerial7.com).—**DAVID DAHLQUIST**

A new home for your to-dos.

Things
for iPad



Managing your to-dos has never been this easy. Things lets you organize your tasks and projects in an elegant and intuitive way.

Watch the video

www.culturedcode.com/macworld

for Mac

Macworld BEST OF SHOW 2009

Macworld 4½

Macworld EDDY AWARDS

Apple Design Award
Mac OS X Leopard Developer Showcase
2009 Winner

for iPhone & iPod touch

Macworld 4

MacLife Editors' Choice

for iPad

Things can be synced wirelessly using Wi-Fi.

The iPad's Camera Connection Kit

BY DERRICK STORY

Bring Photos to the iPad Apple's Camera Connection Kit turns the iPad into a powerful accessory for photographers. Use it as a backup device or a tool for showing off stunning previews.

REVIEW The Camera Connection Kit for the iPad is a perfect accessory for photographers looking to take better advantage of the iPad's display capabilities. Instead of having to connect an iPad to a Mac in order to load it up with your photos and videos, you can move this content directly onto an iPad from your camera by using one of two dock connectors in the kit. This kit makes the iPad an excellent tool for photographers who need to back up photos in the field.

If you shoot with a camera that accepts SD memory cards, use the SD dock connector to transfer media (you can use miniSD cards if you have an adapter). Push the reader in the iPad's port and insert the card. If you shoot with another type of media card, such as CompactFlash, then use the companion USB connector. Attach the USB cord from your camera or try a USB card reader.

When you make the connection, the iPad's Photos app launches immediately and displays thumbnails for every image on the memory card. You'll notice that a new Camera tab appears at the top of the app's interface. This tab remains for as long as you have a device attached to the iPad.

Once connected, the iPad handles a variety of file formats with equal ease. You can import JPEG, raw, and even movie files. When you connect your camera or card, images that have been previously imported from the device will display a green checkmark on the thumbnail. If you shoot Raw+JPEG, a label denoting the pair will appear across the bottom of the image. Even though both files are transferred to the iPad, you will see only one thumbnail.

For my Canon S90, movie files were labeled MOV+THM because Canon cameras create an accompanying data file for their movies. Similarly, if you somehow create an XMP sidecar file, which is also an additional data file, for one of your raw files (via Adobe Bridge, for example), that label too will be displayed on the thumbnail. If you use Image Capture to export the movies to your Mac, the data files should transfer as well. In my testing, however, the XMP files were not moved with the raw files, but the Raw+JPEG pairs were available as separate files.

You can browse all the thumbnails on the card without importing anything to your iPad, but if you want to see bigger versions of the images, you have to transfer them. The simplest way is to tap the blue Import All button in the upper right screen corner of the Photos app. Or, if you want to choose just a handful of pictures to transfer, tap once on them. You can keep track of your selections via the blue checkmarks that appear when you select them. Now when you tap the Import button, the iPad will prompt you to choose either "Import All" or "Import Selected."

Images from the card move to a new album titled Last Import. The photos are also added to a cumulative album labeled All Imported. Basically, this last album is where they live. The iPad does not shrink or alter your original files when it imports them, so your original file can be transferred to your computer in pristine condition.

Unfortunately, the Photos app provides no options for reorganizing your files. You do have other ways to browse your images, however. Click on the Events tab and you'll notice that the iPad has displayed your pictures based on their time stamps. Multiple images appear in a stack that you can expand by tapping or pinching. Geotagged images are organized under the Places tab, where they appear as drop pins that you can tap to reveal the photo stack. And of course, everything also ends up under the main Photos tab.

Once the photos have been transferred, they are available for use just like any other image on your iPad. You can

PHOTOGRAPH BY ROBERT CARDIN

★★★★; $29; Apple, www.apple.com; full review, macworld.com/6259

play slideshows of them, import them into Keynote, share them with others via e-mail or MobileMe, or choose an image as your wallpaper.

If you want to copy imported images from the iPad to your Mac, just connect the two devices and launch iPhoto, Aperture, or Image Capture. You can import selected images right into your photo libraries.

Though not officially supported on Apple's product page, other USB devices may work with the Camera Connection Kit. Many USB microphones, for example, are recognized by sound-recording applications. Other devices aren't recognized, such as USB thumb drives, which prompt messages such as "The attached volume could not be mounted," or "The attached accessory uses too much power." If you plug your iPhone or late-model iPod nano into the iPad via the Camera Connection Kit, however, you can import videos and pictures from those devices into the iPad (for more information, see macworld.com/6239).

Macworld's Buying Advice

The Camera Connection Kit is one of the most important accessories for iPad-toting photographers, especially those who are shooting in the field and want another back-up and previewing option. The Camera Connection Kit is easy to use, accommodates standard files, and provides a few pleasant surprises with additional, although unpredictable, USB device support.

Senior Contributor and professional photographer **Derrick Story** teaches photography on Lynda.com and publishes a weekly podcast at The Digital Story (thedigitalstory.com).

Correction

In our review of Photoshop CS5 and CS5 Extended (*Digital Photo*, July 2010), we misprinted the mouse rating. Instead of ●●●●, it should have been ●●●●½.

Show Off Photos with Keynote

BY DERRICK STORY

Once your iPad is filled with your fantastic photos, you'll want to show them off without having to off-load them to your Mac. You can use the included Photos app, but it doesn't provide any organizing options. If you want more authoring flexibility for your photography presentations than the Photos app offers, take a look at Keynote for the iPad (●●●; $10; macworld.com/6131).

The best way to master this app on the iPad is to view the "Tap to Get Started with Keynote" file that comes with the software. Apple has designed 20 slides that show you the ins and outs of building a killer presentation. You'll see that you have more transitions available than with the Photos app, plus you can reorganize photos on the go, add text, create title slides, animate elements, rotate and scale images, and more.

Not only can you play your Keynote creations on the iPad, but you can transfer them as .key or .pdf files to your Mac. There are two easy ways to do this. Method one is to export the file from Keynote and then move it to your Mac when the two devices are connected. Go to the My Presentations view in Keynote and click the arrow button at the bottom. Choose Export from the pop-up menu, and then pick either the Keynote or the PDF option from the Export Presentation dialog box. Now connect your iPad to your Mac and launch iTunes. In iTunes, click on the iPad icon and go to the Apps tab, scroll down to File Sharing, click on Keynote in the Apps submenu, and you'll see the presentations you've exported from the iPad. Click on the one you want to transfer and then click the Save To button, and you can put the presentation anywhere you want on your Mac.

The second method is to send the files from the iPad via e-mail. Once again, you start in the My Presentations view on the iPad and click the arrow button. But this time you choose Send Via Mail from the pop-up menu. You have the same file-format choices as before. Choose the one you want, and your images are added as attachments to an e-mail that pops up on your screen. Type the address to send the e-mail message to, and click Send.

You can then use Keynote on your Mac to do more work on your presentation, or you can save the presentation in a different format such as a QuickTime movie. Once you get the knack of moving files back and forth from the iPad to the Mac, you'll see that you have an amazing amount of flexibility in the way you display content.

With the optional iPad Dock Connector To VGA Adapter, you can show your presentations on larger displays, such as TVs, projectors, or most anything else that accepts a VGA signal.

Now, the next time someone pulls out an iPhone to share pictures, you can fire up your iPad and really give them a show.

The Secrets of Using Depth of Field

Learn how depth of field works and how you can use it to improve your photographs

BY BEN LONG

The *depth of field* in an image refers to the amount of the picture you choose to have in focus. By choosing how much depth of field to have in your shot, you can focus the viewer's attention in a specific place. This makes depth-of-field control one of the most important creative decisions a photographer makes.

Depth of Field The image on the left has deeper depth of field than the image on the right.

How Depth of Field Works

Depth of field is centered around your point of focus. So if you have ten feet of depth of field, some will be in front of the point of focus, and some will be behind it. Everything outside of this range will be out of focus.

You control depth of field by changing the aperture setting on your camera. Like your eye, a camera lens has an iris inside that can open or close to let in more or less light. You control the size of this hole, or aperture, by changing the aperture setting, which you measure by using a scale of f-stops.

The larger the aperture, the shallower your depth of field will be, meaning a smaller portion of your image will be in focus. The smaller the aperture, the deeper your depth of field will be, resulting in more of your image being in focus. Now here's the tricky part: Aperture size is denoted by a number, and the smaller the number, the larger the aperture. Setting your aperture setting to f2.8 will yield shallower depth of field than setting it to f11. A helpful way to think of it is that a smaller number means less depth of field.

To change your aperture, you must have a camera with an aperture-priority or manual mode. When in aperture-priority mode, you choose the aperture you want, and the camera automatically picks a corresponding shutter speed that will yield an image that is neither too light nor dark. Some lenses (more expensive ones) can open to a wider aperture than others.

A camera with a smaller sensor has inherently deeper depth of field. That means it's difficult to achieve extremely shallow depth of field with a point-and-shoot, even if you have manual controls.

Shoot Shallow Depth of Field

In a portrait it's nice to have a shallow depth of field so that the focus is on the person's face. But shallow depth of field is also handy any time you need a way to separate a subject from a busy background—street shooting, event shooting, and many other situations can benefit from a reduction in depth of field.

If you open a lens to its largest aperture, you might have a difficult time focusing. This will make your backgrounds go too soft and make it difficult to keep the correct parts of your image in focus. Camera position is also critical for achieving a shallow depth of field. While you might have your aperture set to a nice wide opening, if there's nothing visible in the background, then you won't be able to tell that the image has a shallow depth of field. The perception of the depth of field in an image depends on the size of the objects in the background, so be sure to compose your shot so that there's something big in the background to reveal the shallow focus.

Shoot Deep Depth of Field

There are also times when you'll want to ensure a deep depth of field. Landscape images, for example, can work better when everything in the frame is in focus. Product shots, some still life images, and any shot where you need to see both foreground and background details will also benefit from a deep depth of field. There are two important factors to keep in mind for deep-focus shots.

First, though it's tempting to dial in the largest f-number you can, this is usually a bad idea. As the aperture size gets smaller, your image can suffer from an optical effect called *diffraction*, which reduces the sharpness in your image. I typically find that once I go smaller than f11, I see a noticeable drop in sharpness.

Second, remember that depth of field is centered around your point of focus, with some of the range in front, and some behind. When shooting a landscape, if you focus on the horizon, then some of your depth of field will actually fall behind the horizon. In other words, you won't be making the best use of the depth of field that's available, so your foreground might end up out of focus.

So a good rule of thumb is to focus about one-third of the way back from the horizon. This will include more of the foreground in your depth-of-field range.

Practice Using Your New Tool

Depth-of-field control is one of the most important tools in your creative toolbox. Spend time experimenting and practicing with different apertures, lenses, and focusing techniques, and it will soon become second-nature to you.

New Cameras Have DLSR Features in a Compact Size

BY TIM MOYNIHAN

Sony is releasing two new entries into the interchangeable-lens camera category—the Alpha NEX-5 and NEX-3 (macworld.com/6240). These slick new cameras fall somewhere between a point-and-shoot and a DSLR. The cameras are about an inch thick, have DSLR-worthy 14.2-megapixel APS-C CMOS sensors, and can shoot video.

Like other interchangeable-lens cameras—including the Olympus Pen E-PL1, the Panasonic Lumix DMC-GF1, and the Samsung NX10—these NEX cameras are aimed at entry-level DSLR buyers who don't want the bulk or complexity of a DSLR. Beginners will take to these cameras immediately, and more-advanced photographers are likely to be tempted by the cameras' small size, vibrant display, and creative user interface.

The NEX cameras use Sony's new E-mount lens system. They offer no body-based image stabilization, but the E-mount lens uses Sony's Optical SteadyShot stabilization system. In addition to the E-mount lenses, an adapter that lets you use Sony's A-mount lenses with the camera is sold separately.

For beginners, helpful in-camera guides offer general shooting tips and creative ways of controlling the settings. You can easily create blurred backgrounds and shallow depth-of-field effects without jumping into the aperture-priority or manual modes; when you have the camera in Intelligent Auto mode, you can invoke the Defocus Background option by rotating the scrollwheel on the back of the camera.

Another big draw is the tiltable 3-inch LCD, which is practically a miniature HDTV. It's extremely sharp, crisp, and bright, and it might make purists forget about the lack of an optical viewfinder very quickly. You can tilt the LCD up and down, but it doesn't swivel; it's built for odd-angle shots, but not self-portraits.

Both cameras shoot video. The NEX-5 shoots 1080i high-definition video in either AVCHD or MPEG-4 format, while the slightly lower-end NEX-3 maxes out at 720p MPEG-4 video. The other key difference between the two cameras involves the body: The NEX-5's body is made out of magnesium alloy, comes in black and silver, and has a larger grip, while the NEX-3 has a polycarbonite body available in silver, black, and red.

Advanced users may not be thrilled about the lack of an optical viewfinder, the omission of a pop-up flash, and the absence of a mode dial on the top of the camera. There is only a power button, a shutter release, a dedicated video button, and a playback button. The NEX-3 and NEX-5 may appeal more to recent point-and-shoot graduates than to seasoned photographers, but the cameras' ultracompact size and fun features give them serious potential for crossover appeal.

The Sony Alpha NEX-3 will sell as a kit with a 16mm prime lens for $550, or with an 18mm to 55mm zoom lens for $600. The Sony Alpha NEX-5 will cost $650 with the 16mm prime lens and $700 with the 18mm to 55mm zoom lens. A third, optically stabilized, 18mm to 200mm f3.5/f5.6 zoom lens will be available separately in the fall for $800.

Reader Tips

Macworld readers share their photo advice

Have a great photography tip you'd like to share? E-mail it to digitalphoto@macworld.com.

Use Natural Light

Using existing light is often much more dramatic and interesting than the flat, nonflattering light that flashes create. Using the higher ASA speeds in today's digital cameras, combined with image stabilization, allows you to shoot in much lower light situations than you could just three to four years ago.

heyjp

A Better Bounce

If you are bouncing an external flash, try a snap-on diffuser like the ones made by Opteka (opteka.com). These small, translucent white boxes snap over the front of the flash and disperse the light in a full hemisphere. Point the flash head about 20 degrees off vertical for a balance of bounced and direct lighting.

rgetter

Print on Thick Paper

You have to be careful when printing on any of the specialty matte or rag type papers. Sometimes these thicker papers do not feed well, even on professional Epson printers like the R2400 or similar printers. You are better off using those papers with big tray-feeder printers like the Epson 4800 series.

Photonerd

REVIEWS

Hardware, Software, and Accessories for Making and Managing Photographs

HARDWARE

Casio Exilim EX-G1 △

The ruggedized Casio Exilim EX-G1 point-and-shoot digital camera is a worthy companion for your next outdoor adventure. The 12.1-megapixel EX-G1 features a 3X optical-zoom lens (38mm to 114mm), a 2.5-inch LCD screen, and a variety of preset Best Shot modes. It's just 5.4 ounces and 0.78 inch thick. The EX-G1 takes microSD and microSDHC cards, and is available in black or red. This is not the best camera to choose if you're looking to snap breathtaking, wall-size photos of the great outdoors. But if you want to pack something small for taking quick shots on your next mountain-biking, rafting, or rock-climbing trip, this camera is sturdy enough to withstand the journey (macworld.com/6198).

●●●; $300; Casio, www.casio.com

Eye-Fi Pro X2 ▷

The 8GB Pro X2 is the latest wireless SD card from Eye-Fi. It can stream your photos to your Mac, upload them to your favorite social networking site, and even geotag the pictures along the way—all while the card is still in your camera. For these new cards, Wi-Fi capability has been beefed up to a speedier 802.11n, and Eye-Fi has introduced greatly improved new companion software, Eye-Fi Center, to manage all card functions. The Eye-Fi Pro X2 is best suited for casual photographers who prefer convenience to speed. The price for this convenience, however, is more than triple the cost of high-performance 8GB SD cards without Wi-Fi (macworld.com/6199).

●●●½; $149; Eye-Fi, www.eye-fi.com

VuPoint Solutions Digital Photo Converter PC-C520-VP ▷

Designed with the technophobe in mind, the PC-C520-VP lets you slip a printed picture into a photo tray, insert the tray into a slot, and press a copy button. The unit will quickly scan your photo as a 2592-by-1800-pixel JPEG. The PC-C520-VP feeds photos crookedly, however, produces middling image quality, and has limited editing options. However, it does provide an easy and quick way to electronically store all your printed photos (macworld.com/6200).

●●½; $130; VuPoint Solutions, vupointsolutions.com

Top Products YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

DIGITAL CAMERAS
SLR

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
E-30 www.olympusamerica.com	●●●●½	$829	12.3-megapixel	4453
EOS 7D www.canon.com	●●●●	$1609	18-megapixel	6014
D-3000 (pictured) imaging.nikon.com	●●●●	$479	10.2-megapixel	6090

DIGITAL CAMERAS
Point-and-Shoot

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Exilim Ex-FC100 exilim.casio.com	●●●●	$285	9-megapixel	6091
PowerShot S90 (pictured) www.canon.com	●●●●½	$357	10-megapixel	6016

PRINTERS
Inkjet

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Officejet Pro 8000 Wireless (pictured) www.hp.com	●●●●	$114	document, photo	6017
PictureMate Dash PM 260 www.epson.com	●●●●	$107	snapshot, photo	5609

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

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DIGITAL PHOTO

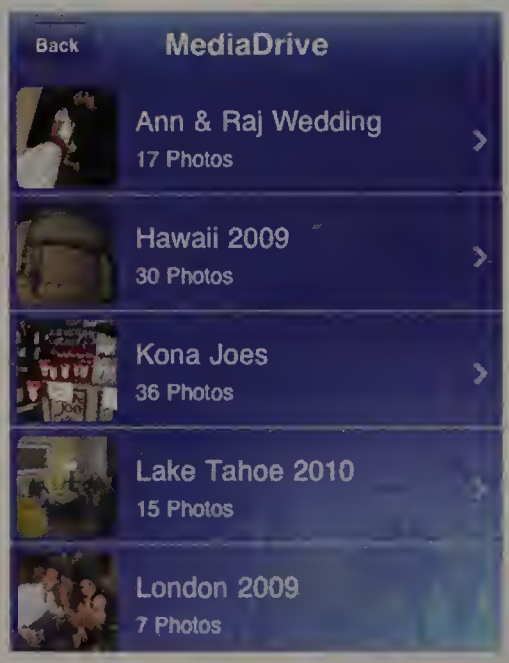
Macworld HOT STUFF

What We're Raving about This Month

WD Photos App

WD Photos is a new app from Western Digital that is designed to showcase your photos stored on compatible WD networked hard drives. Photos are accessible anywhere you are (as long as your iPhone or iPod touch has an Internet connection, of course), and the app also keeps offline copies of recently accessed photos for your stuck-on-the-subway or AT&T-is-down-during-my-commute-home-again browsing pleasure. You can organize and access photos by album or folder, and search and filter them. You can also assign photos to contacts, e-mail them to friends, save them to your device's camera roll, and play them as a slideshow (free; macworld.com/6201).

—DAVID CHARTIER



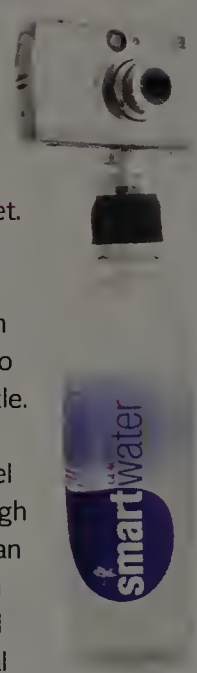
Aquapac Waterproof Camera Bag

You can find a custom underwater casing for most camera models. But another, less-expensive option is to get a waterproof camera pouch instead. These pouches from Aquapac come in a variety of sizes, including soft bags for point-and-shoot cameras and bags with rigid lens compartments for DSLRs. The Aquapac bags give you room to access most of your camera's controls and to extend your zoom lens. The case is guaranteed down to 15 feet ($35 to $130; aquapac.net).—HEATHER KELLY

Delta Point and Shoot Diffuser

Your point-and-shoot camera's built-in flash probably has a few settings you can tinker with. But unlike an external flash that attaches via a hot-shoe, there's no way to redirect it or bounce its harsh light. The Delta Point and Shoot Diffuser from Gary Fong is a simple filter that mounts on a compact camera's zoom lens and covers the flash. When your camera's built-in flash fires, the translucent and textured plastic disperses the light for more-attractive portraits (about $16; garyfong.com).—HEATHER KELLY

The Bottle Cap Tripod



Tripods can be bulky, but this inexpensive little gem from Photojojo can fit in a back pocket. When you're traveling light and need to steady your point-and-shoot camera for a shot, you can mount the bottle cap tripod onto any standard water or soda bottle. You'll need to keep the bottle steady, so it's best to use a vessel that's still at least half full to weigh it down. The bottle cap tripod can pivot 15 degrees in any direction and is compatible with any small camera that already has a typical tripod socket ($10; photojojo.com/store).—HEATHER KELLY

POLAROID POGO INSTANT PRINTER

This gadget from Polaroid is for photographers who enjoy instant gratification. The PoGo pocket-size printer can connect directly to your compact, DSLR, or phone camera via a USB cable or even Bluetooth. Photos are uploaded from your camera and printed right away on Polaroid's proprietary 2-by-3 inch inkless paper (called ZINK), which is sold separately in packs of 30 sheets for $11. Each photo can take up to one minute to print. The prints themselves are of the quality you'd expect for an inexpensive pocket printer, but like the original Polaroid shots, they have character ($50; polaroid.com).—HEATHER KELLY

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What Makes a Great Font?

Choosing the right typeface for your project

BY JAY J. NELSON

Typically, a list of best-selling fonts does not represent the most interesting designs—in fact, best-selling fonts are often simply new OpenType versions of older text fonts.

So what constitutes an interesting font? Graphic designers look for several things: appropriateness for the project at hand; an elegant and refined design; typographic extras such as ornaments and alternate characters (glyphs); and if fonts will be used in text-heavy projects, an extended family of weights and styles. It also helps if the font seems fresh and not overused by everyone, everywhere.

The MyFonts.com Website has an excellent annual Top 10 list—my favorites from that list are Aphrodite Slim Pro, Champion Pro, and Liza Pro, because of their huge sets of alternate glyphs and advanced OpenType features that automate the use of thousands of glyphs.

They are graced with beautiful swirls and swashes, many of which are attached to alternate versions of standard characters. Examine the same letter in different locations, and its shape changes according to letters on either side of it.

Magazine designers are constantly on the lookout for unique fonts that complement article topics. Two great examples of fonts that could appear as graphic headlines in a magazine are Narziss and Memoriam. Both work best at large sizes because of the dramatic difference in weight between the thin and thick strokes of the letters, which tend to break up at smaller sizes. This also makes them suitable for use in posters.

If you're looking for a book text font, Calluna is a useful choice. It has several weights, along with elegant italic styles.

Making the Charts From the MyFonts annual Top 10 come the following fonts for headlines, body type, and display: A Alright Sans, B Liza Pro, C Narziss, D Memoriam, E Aphrodite Slim Pro, F We Love Nature, G Champion Pro, H Geogrotesque, I Calluna, and J Ivory.

This variety is helpful when you need to distinguish between headlines, subheads, text, and captions. In addition, Calluna includes ornaments for beginning or ending chapters, and a true small caps style for callouts, quotes, and other places where you want variety. While some publishing applications can create a fake small caps style from a regular font, these rarely look right—the difference in thickness between the large caps and the small caps looks unprofessional.

If your book leans more toward the fantastical, look at Ivory. The illustrated capital letters are perfect for chapter titles, or even for the book jacket. In addition, the illustrated backgrounds for the letters are available separately, so you can stack them and even apply different colors to the foreground and background of the letters.

A catalog project requires an even larger array of weights and styles, which the best-selling Alright Sans provides. Its design is modern, yet approachable—and not so unfamiliar as to be distracting. The wide-open design of its letterforms lends itself to use in a wide range of sizes, as well as in Web pages. And it has old-style numbers that blend in nicely with the text—a feature also available in Calluna.

Both of these fonts include lining numbers, which feature an equal width for each number, so they line up when used in a vertical column. We've become accustomed to seeing lining numbers because they have been included in all fonts since the beginning of the desktop publishing era. Old-style numbers were previously available only in special font

sets, but now they're included in some of the advanced OpenType fonts.

If you're designing, say, a timetable, an events chart, or liner notes for a CD, try Geogrotesque. The letters have uniform strokes: There's little difference in width between vertical, horizontal, and curved segments. Its modern—even postmodern—appearance also lends itself to low-resolution display, such as for Web pages.

We Love Nature, a picture font, reminds us that fonts may contain any kind of shape, not just letters. These flowers are simply outlines placed into the slots normally reserved for letters in a font. Type the letter *A*, and you get one of these flowers; type *B*, and you'll get a different one. This font is one example of hundreds of fonts that contain outlines of different objects—everything from fish to cats, airplanes to people, and weapons to Michelangelo's drawings.

Jay J. Nelson is the editor and publisher of *Design Tools Monthly*, an executive summary of graphic design news.

Repetition Inspires Resplendent Designs

Even if you've never attended an art class, you can design creative, readable documents. Just keep in mind some easy principles, and you'll wind up with compelling posters, cards, invites, and newsletters. Let's look at the repetition design rule.

Whether you're creating a tri-fold brochure, an 800-page book, or a quarter-page ad, repetition will give your piece a cohesive feel by introducing consistency.

To include repetition in your designs, simply pick an item in your layout—a graphic, font family, or color—and repeat it throughout the piece. Repetition can be as simple as selecting an item and using copy and paste. However, for programs that support layers—such as Adobe Photoshop, Illustrator, or InDesign—here are more tips.

Repetition Reinforcement The feather was repeated to draw attention to important details, the text color was snatched from the logo, and bolding was repeated for the first line of text in each block.

Duplicating Layers If the repeatable item lives on its own layer, you can duplicate that layer by activating it and pressing ⌘-J. If you have a selection, this shortcut will jump the selection onto another layer.

Ungrouping Artwork If your artwork is from Adobe Illustrator, you might need to break it apart in order to select the piece you want. If so, select the entire thing, choose Object ▶ Ungroup, and then use the Selection tool to grab the bit you want. You can also copy an item in Illustrator and paste it into InDesign. Sweet!

Step and Repeat InDesign and QuarkXPress let you repeat an item any number of times at an equal distance. Select the item and then choose Edit ▶ Step and Repeat.

Copying Color If your program has an Eyedropper tool—such as in Photoshop, Illustrator, or InDesign—you can use it to snag color from elsewhere on your page. Just highlight the text, activate the Eyedropper tool, and then mouse over to where the desired color lives and click to apply—the new color appears in your Tools panel.

A little repetition goes a long way toward giving your designs a more cohesive feel.—**LESA SNIDER**

Essential Design Sites

BY JACKIE DOVE

When it comes to creative projects, even professional designers need help now and then. There's no shortage of Websites they (and we civilians) can turn to for inspiration and advice. Whether for specific technical instruction or just good ideas, these four sites are among my favorites.

Planet Photoshop This site features an abundance of tutorials that'll help you fix problem photos or make your shots more vibrant. Though sponsored by the National Association of Photoshop Professionals, you don't have to be a member to benefit from all the cool stuff (www.planetphotoshop.com).

Digital Photography Review If you want to know everything about nearly any digital camera, go here. The site includes almost every vendor and covers point-and-shoots, compacts, DSLRs, and lenses. There are forums, how-tos, sample images, and more (www.dpreview.com).

Smashing Magazine This is the ultimate Web designer's companion. For experienced developers or just people doing research, this site has tons of engaging information. Check out tips and coding tutorials, plus all the icons, graphics, wallpapers, themes, photos, and fonts you'll ever want (www.smashingmagazine.com).

I Love Typography Whenever I need help with type, I head to I Love Typography, an inviting blog that covers all aspects of the subject. The site's links are deep and complete, with connections to plenty of other font-centric resources and sites (www.ilovetypography.com).

GarageBand '09: Edit for Clean Transitions

BY DAVID WEISS

Unlike Apple's Logic Pro or Logic Express digital audio workstation software, GarageBand '09 is not set up for precisely editing the audio content of Real Instrument tracks. But with a few simple yet powerful techniques, you can eliminate the artifacts that prevent your tunes from sounding their best.

1. Choose Your Material Let's say you recorded a bass part to a Real Instrument track, but the performance is a bit uneven, and now you want to choose just one measure and repeat it for the final piece. This is merely one situation in which you can apply the following editing technique.

After launching GarageBand, change the LCD mode to show measures (if it isn't in this mode already) by clicking on the icon to the left of the digital readout at the bottom of the window or by choosing Control ▸ Show Measures In LCD. Place the playhead at the start of the first measure you want to repeat.

To open the editor, double-click the region containing the material you want to loop.

2. Zoom In (Really) Tight First, set the small Lock The Timeline And Editor Playheads button (in the lower right corner of the Timeline) to Lock so that the playhead in the editor remains in view when you zoom. Then drag the zoom slider (at the bottom left of the editor) all the way to the right.

This tiny control locks and unlocks the timeline and editor playheads so you can see and control different parts of your project.

After you've zoomed in all the way, you'll see a series of peaks and valleys, which is a waveform display that represents actual sound waves.

Notice the 0, +, and – symbols to the left of the editor. When the wave is above the zero line (in the plus region), it is pushing the listener's eardrum inward; when the wave is below the zero line (in the minus region), it is pulling the listener's eardrum outward. Any time the eardrum moves, we hear sound.

But when a sound wave is exactly midway—at the zero-crossing point—there is no sound (or very little). And this is the exact point at which we're going to start editing, resulting in a pop-less transition from region to region.

3. Cut Before making your edit, change the LCD mode to show time. Then position the playhead at the zero-crossing point, and choose Edit ▸ Split (or press ⌘-T). Zoom in on the timeline (top pane), select just the excess snippet, and delete it.

Your iPad/iPhone Idea to Ca$h Flow in 4 Steps

1. Bring your application idea to Zco
2. Zco *designs* and *develops* your app
3. Zco helps you *market* your app
4. Sit back and collect monthly checks

ur 2 $ 4

Software Development & Digital Media Marketing Services

Look for these apps in the App Store

NameCatcher — Lifestyle
Abbo EMR* — Medical
Postcard Star — Travel
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Zero-Crossing Point Place the playhead exactly at the zero-crossing point between two sound waves. These are the places to make your edits.

4. Fine-Tune Notice that because you didn't make the cut exactly at the start of the measure, you have a very small gap between the audio and the measure line. This is inaudible; but we're going to fill this space with silence (or "room noise," actually). That way, we can avoid subtle timing problems and enable the edited region to automatically change tempo if you drag it into different projects as a loop (see next tip).

Select a small flat piece of audio that has no waveforms in it by clicking and dragging while the cursor is a large crosshair, and then copy it. Change the LCD mode to show measures, place the playhead at the start of the measure, and paste (it's OK if there's a tiny gap between the regions). Select both regions in the timeline, and choose Edit ▸ Join to connect them. Don't worry if the waveforms change slightly; this won't affect the sound.

5. Finish the Loop Repeat steps 1 through 4, this time at the end of the measure. Then turn your edited region into a loop by dragging it from the upper right corner, so that the cursor turns into a circular arrow; this will repeat your sound for as long as you drag. Tip: Add your loop to the Loop Browser by selecting it and choosing Add To Loop Library from the Edit menu.

In addition to creating loops, you can use this technique for seamlessly piecing together sections of any audio (Real Instrument) content, so you can sound like the pro you know you are.

It's 2010. Can your personal finance software export to TurboTax or Excel? Schedule payments? Track buys and sells in your portfolio? Let you enter, edit or split transactions manually? Sync to a mobile version for iPhone? Protect your data? Handle multiple currencies? Print custom checks? Import accounts, transactions and investments from Quicken? iBank can.
Free trial: IGG SOFTWARE
J&R fry's ELECTRONICS OfficeMax MICRO CENTER TEKSERVE amazon.com Apple Stores

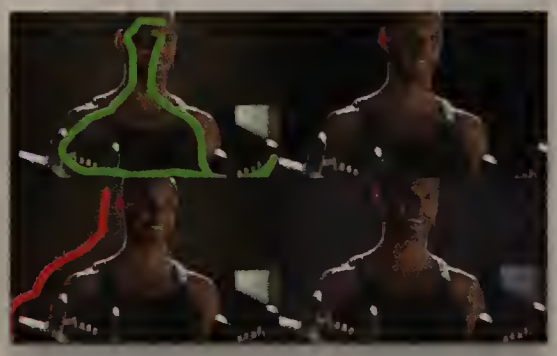
REVIEWS

Hardware, Software, and Accessories for Your Creative Endeavors

SOFTWARE

After Effects CS5 ▽

After Effects, Adobe's powerful motion graphics software for designers and visual effects artists, is one of three programs in



the new version of Creative Suite to go 64-bit–native, taking full advantage of the multicore processors and expanded RAM capacity of the newest Macs. The new version debuts the Roto Brush tool and features native support for the AVC-Intra 50 and AVC-Intra 100 codecs (macworld.com/6212).

♦♦♦♦½; $999; Adobe, www.adobe.com

Fireworks CS5

While there are no new headliner features in Fireworks CS5, the program contains much-needed feature refinements and upgrades, primarily accessible via the Properties panel. The expanded cross-application integration alone makes the software a must-have for mobile and Web user-interface designers (macworld.com/6211).

♦♦♦♦½; $299; Adobe, www.adobe.com

Flash Builder 4

Newly recruited into the Adobe Creative Suite is Flash Builder, a program for building interfaces that collect data (through forms) and present data (through views) from server databases. It meshes smoothly with interface prototypes created by designers in Flash Catalyst CS5. For Flex and ActionScript 3 coders, Flash Builder is essential (macworld.com/6209).

♦♦♦♦; $249; Adobe, www.adobe.com

Flash Professional CS5 △

Flash Professional's niche is animation. But anyone who wants to use Flash to produce finished applications and objects will need Flash Professional CS5. For projects that include enhanced text formatting, XML-based Flash (FLA) files, and easier ActionScripting, it is worth the upgrade (macworld.com/6213).

♦♦♦♦; $699; Adobe, www.adobe.com

InCopy CS5

The latest upgrade to InCopy, the text-editing program that integrates with CS5's InDesign page-layout software, offers a variety of helpful new features in a relatively modest update. The new Eyedropper tool, the Span/Split Columns feature, the enhanced Track Changes, and more will make life easier for editors (macworld.com/6258).

♦♦♦♦; $249; Adobe, www.adobe.com

Soundbooth CS5 △

Soundbooth is a capable audio editor that can be used by people with limited audio-editing experience. But though Adobe continues to develop the application, the CS5 version is a meager update that fails to address the software's most glaring shortcomings (macworld.com/6210).

♦♦♦; $199; Adobe, www.adobe.com

Top Products YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

DVD BURNERS
Desktop and Portable

PRODUCT	RATING	PRICE [A]	TYPE	FIND CODE [B]
d2 DVD±RW w/LightScribe www.lacie.com	♦♦♦♦	$97	desktop	3900
MediaStation 8X External Blu-ray Writer (pictured) www.buffalotech.com	♦♦♦♦	$300	Blu-ray	S344

CAMCORDERS
High Definition

PRODUCT	RATING	PRICE [A]	TYPE	FIND CODE [B]
Flip MinoHD (120 Minutes) (pictured) www.theflip.com	♦♦♦♦½	$200	mini camcorder	SS12
HDC-HS300 www.panasonic.com	♦♦♦♦	$815	HDD/SD card hybrid	6106

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

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Mac OS X Hints

The insider tips you won't get from Apple

BY MACWORLD STAFF

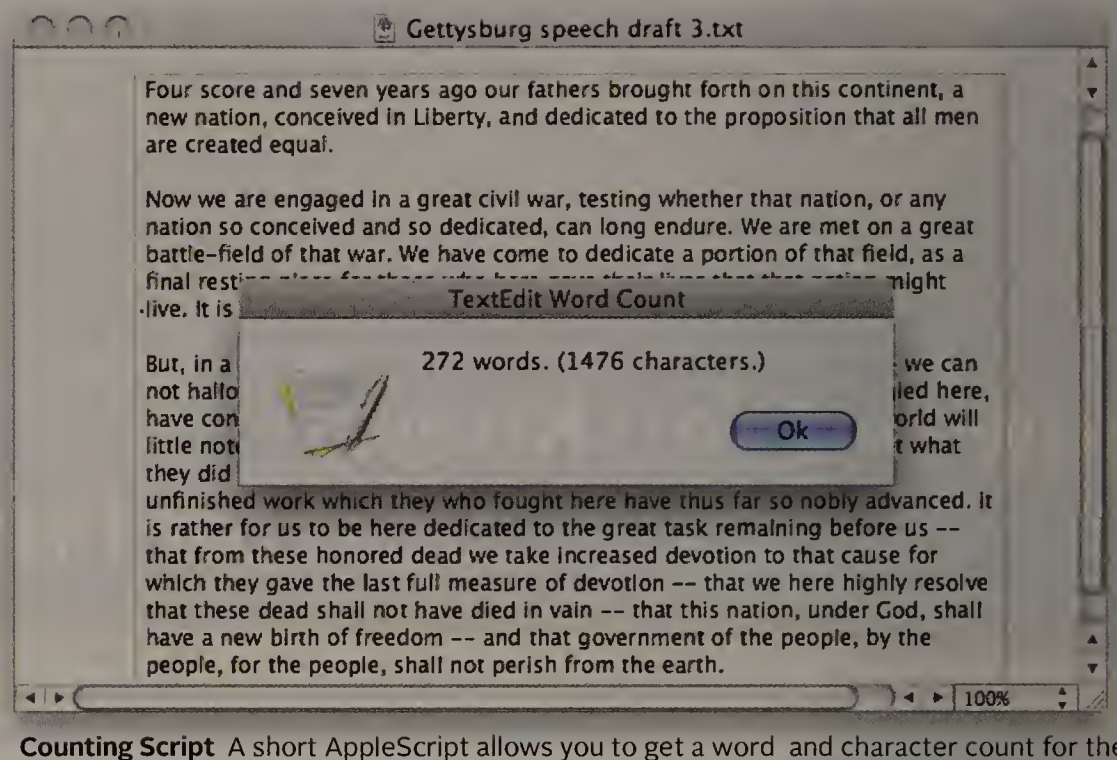
Add a Word-Count Tool to TextEdit

TextEdit is a nice, lightweight text editor, but in at least one sense it's *too* lightweight: It doesn't have a word-count feature. One MacOSXHints.com reader figured out a solution, though: an AppleScript that adds a word- and character-count pop-up dialog box to OS X's built-in editor.

Open AppleScript Editor (in /Applications/Utilities) and then type the script in "Word Count." (Note that the line beginning `set show words` is a long one; it ends with `characters.)"`. Ditto for the line beginning `display dialog show_words`; it ends with `default button "Ok"`. If typing all that is too much of a hassle, you can go to macworld.com/6196 and copy and paste the code from there.) That done, save it in *youruserfolder*/Library/Scripts/Applications/TextEdit (if that folder doesn't exist already, create it) and give it a name, such as 'Word Count'. Next, open AppleScript Editor's Preferences, and on the General tab make sure Show Script Menu In Menu Bar is selected.

Now, with any TextEdit document open, you can select your script from the menu bar's Script menu. When you do so, a small dialog box will appear, telling you the number of words and characters that are in the active document.

Note that you could embed the same script in an Automator-based service, which would then be available in any app. You could also download Devon Technologies' free WordService (www.devon-technologies.com); its Statistics tool provides word and character counts (for more on WordService, see this month's *Mac 911*, page 82).



Counting Script A short AppleScript allows you to get a word and character count for the currently open TextEdit document.

WORD COUNT

```
tell application "TextEdit"
  set word_count to count words of document 1
  set char_count to count characters of document 1
  set show_words to (word_count as string) & " words. (" &
(char_count as string) & " characters.)"
  set dialog_title to "TextEdit Word Count"
  display dialog show_words with icon 1 with title
dialog_title buttons {"Ok"} default button "Ok"
end tell
```

Save Mail Messages in Text Files

You can, of course, save the contents of a Mail mailbox as an archive. But the messages in those archives can be read only if you import the archive back into Mail. What if you want to archive those messages as a text file that's easy to read and search?

The solution turns out to be pretty simple: Select the messages you want to archive (no need to expand message threads) and choose Save As. At the bottom of the Save As window, open the Format pop-up menu and select the Rich Text option. Mail will then save the selected messages (expanding threads as necessary) to a single RTF file; that file will include images and other attachments, as well as message text.

You can also select the messages, copy

MUG PHOTOGRAPH BY PETER BELANGER, ICON BY PAUL HOWALT

them with ⌘-C, open a new RTF document in TextEdit, and paste the messages with ⌘-V. Or another option you have is to save selected messages as Raw Message Source (instead of Rich Text), producing Unix-friendly .mbox text files.

View iPad-Optimized Apps in iTunes

Now that the iPad has been released, there are three kinds of apps in the App Store: apps made specifically for the iPhone (and iPod touch), apps made specifically for the iPad, and *hybrid* apps that include both iPhone- and iPad-optimized interfaces in a single download.

The problem is that, while the iTunes Store provides a convenient button for browsing either iPhone-only apps or iPad-only apps, the iTunes application makes it much harder to tell the difference between the two types. If you select Apps in the iTunes sidebar, you'll see a list of all downloaded apps. But by default iTunes doesn't differentiate them, and when your iPad is connected, the Apps tab for your iPad provides no way to view just the iPad-specific apps.

Have a Hint to Share?

Navigate to MacOSXHints.com to submit it. This column was based on tips from Wolfgang Lutz, Mark Russel, and anonymous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.

However, there are a couple of ways to distinguish your iPad and hybrid apps: Click on the Apps item in the iTunes sidebar (your iPad doesn't need to be connected) to view all downloaded apps. Choose View ▸ As List. Then select View ▸ View Options and check the box next to Kind (or Control-click any column header in the Apps view and choose Kind); this action adds the Kind column to the list.

Click on the header of this Kind column, and your apps will be sorted by app type: iPad app, iPhone/iPod touch app, or iPhone/iPod touch/iPad app (click again to invert the sort order). Unfortunately, iPhone/iPod touch apps end up *between* the two types of iPad-optimized apps, so it's a bit of a hassle to view all apps with an iPad interface. But it's better than nothing.

The other way to view apps in such groups is to choose View ▸ As Grid and then choose View ▸ Grid View ▸ Applications. This shows you a graphical view of all your downloaded apps, grouped by app type.

Modified	Kind	Seller
010 9:43 PM	iPad app	ABC Digit
2010 1:07 PM	iPad app	AccuWeat
2010 1:21 PM	iPad app	Adobe Sy
2010 12:14	iPad app	AOL
2010 5:55 PM	iPad app	Appigo
010 12:13 AM	iPad app	Apple Inc
010 12:14 AM	iPad app	Apple Inc
010 12:14 AM	iPad app	Apple Inc
010 12:14 AM	iPad app	Apple Inc
2010 1:17 PM	iPad app	The Asso
2010 9:41 AM	iPad app	Atomic A
010 10:52 PM	iPad app	BBC Worl
010 3:21 PM	iPad app	Bloomber

What Kind of App Is That? Wondering which of your apps are iPad-compatible and which aren't? Sort the iTunes Apps list by Kind.

POWER TIP OF THE MONTH

'Sleep' Your Screen with a Script

Sometimes it'd be nice to be able to put just your Mac's display to sleep, without knocking out the entire machine. For example, say you've scheduled a backup utility to run in the middle of the night. You want your Mac to wake up (and then, when it's done, put itself back to sleep). But you don't want its screen to be blazing away in the dark the whole time.

If you were sitting at the keyboard, you could press Shift-Control-Eject to put the screen to sleep. But what if you're not at your keyboard when you want the screen alone to sleep? An AppleScript, in conjunction with Exposé's Active Screen Corners feature, could help.

To start, go to the Active Screen Corners section of the Exposé preference pane and set the top left corner to Put Display To Sleep. Then, open the AppleScript Editor (in /Applications/Utilities), and type the script in "Screen Sleeper Shell Script" into it. (Note that the script is just two lines long; the first one, beginning **`do shell script`**, doesn't end until **`((0, 0));\""`**. Don't want to type? You can go to macworld.com/6197 and copy and paste the script from there.)

That done, you can put your screen to sleep by invoking the script in whatever way you wish. In the case of the middle-of-the-night backup, you could create a recurring iCal event that starts a minute or two after your backup begins. From that event's Alarm drop-down menu, select Run Script and then navigate to the sleeper script.

The one downside to this technique is that, if your mouse ever ventures into your screen's upper left corner (to open the Apple menu, say), you'll put your screen to sleep. If that makes this method seem like too much trouble, then check out a utility called Sleep Display (sites.google.com/site/linestreet).

SCREEN SLEEPER SHELL SCRIPT

```
do shell script "python -c \"import objc;bndl =
objc.loadBundle('CoreGraphics', globals(),
'/System/Library/Frameworks/ApplicationServices.
framework');objc.loadBundleFunctions(bndl,
globals(),[('CGWarpMouseCursorPosition',
'v{CGPoint=ff}')]);CGWarpMouseCursorPosition((0, 0));\""
tell application "Finder" to activate
```

Mac 911

Solutions to your most vexing Mac problems

BY CHRISTOPHER BREEN

Empty iPhoto's Stubborn Trash

Q: My iPhoto trash contains 474 items. I've been trying to empty the trash but it just won't go away. Do you have any suggestions for how to do this?

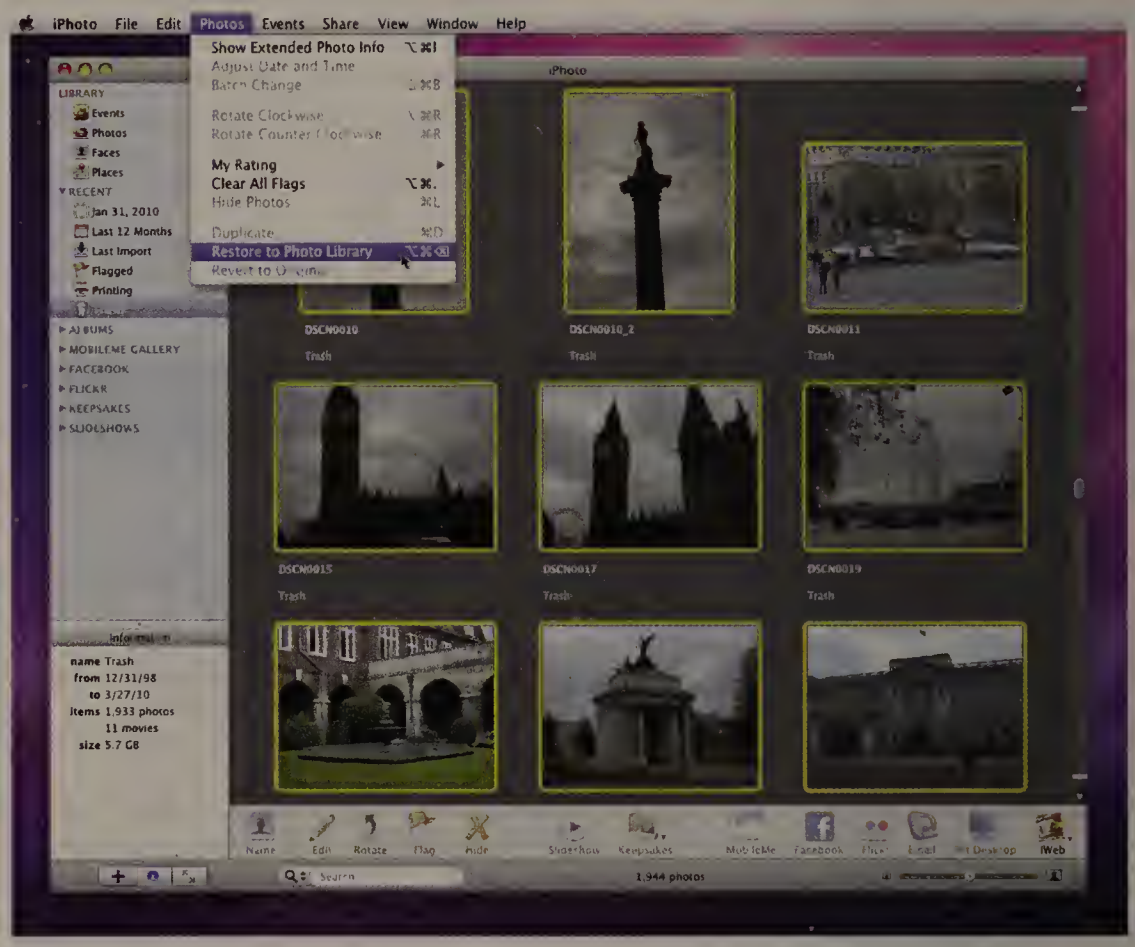
Via the Internet

A: As I've mentioned before in these pages, when you delete images in iPhoto, they go into a separate iPhoto trash folder, but they're not actually deleted from your Mac until you expressly tell iPhoto to empty the trash. To do this, Control-click (or right-click) iPhoto's Trash icon and pick Empty Trash from the contextual menu.

If this doesn't work, it's possible that you've hit a fairly common snag where iPhoto won't delete a lot of images at one time. Select all the images in the trash, assign an identifying keyword to them (for purposes of this example, use 'trash'), and choose Photos ▸ Restore To iPhoto Library (see "Trash Photos"). This places the trashed photos back in your iPhoto library.

Now choose File ▸ New Smart Album, create an album with a condition that reads Keyword Is Trash, and click the OK button to create the smart album. Select a hundred or so images in the smart album and press ⌘-Option-Delete. This tosses those images in the trash. Now use the Control-click (or right-click) trick to empty the trash. Continue doing this until all the images are really gone.

If none of this works, iPhoto may be corrupted. Quit the program, hold down ⌘ and Option, and launch it again. A Rebuild Photo Library window will appear, in which you'll see a number of repair options. Start with the first one (Rebuild The Photos' Small Thumbnails) and give the rebuild option a try. Check iPhoto after you've done this to see how it behaves. If it's still acting funky, give the next option in the Rebuild window a go. Rinse and repeat until iPhoto bends to your will.



Trash Photos If iPhoto won't empty its trash, try tossing out images in smaller batches.

Sort Out-of-Sorts Contacts

Q: Since I upgraded to OS X 10.6.3, the addresses in Address Book refuse to sort. I tried changing the way contacts are sorted in the program's preferences, but nothing works. Is there anything else I can do?

Michael Hull

A: This is another one of those "if all else fails, nuke the preference files" situations. This option follows such tried-and-true methods as changing preferences within the application, restarting your Mac, and cursing.

In this very particular case, you should follow this path: *youruserfolder*/Library/Preferences; then enter `AddressBook` in the Search field (search by File Name in the Preferences folder). This will turn up both the com.apple.AddressBook.plist and com.apple.AddressBook.abd.plist files. Next, quit Address Book, drag these files to the desktop, and relaunch Address Book. Doing this will create new preference files, and your contacts should now be sorted according to Address Book's default settings: Show First Name Before Last Name and Sort By First Name.

If everything is as hunky-dory as I suggest it should be, go ahead and trash the old preference files that you dragged to the desktop.

Have a Problem?

Go to the Mac 911 forum (macworld.com/2467) for help with your misbehaving Mac or applications.

Unhappy Holidays

Q: I would enjoy the Genius Mixes feature in iTunes a whole lot more if it weren't for the fact that my holiday songs get mixed into every Genius genre. I'm wondering if there's a work-around (other than putting all my holiday music into a separate iTunes library).

Richard Potter

A: Genius isn't terribly bright when it comes to discerning season-appropriate music. If it were, on each January 7th Genius would scan your iTunes library for any track assigned with the Holiday genre tag and promptly ignore it until the end of the year.

Fortunately there's a way to get Genius Mixes out of the holiday mood: Uncheck the box next to any selections you don't want to include in a Genius mix. To do that, create a smart playlist and then create a condition that reads Genre Contains Holiday. Select this smart playlist, hold down the ⌘ key, and click on any track's checkbox. All the tracks in the playlist will be unselected.

If, in the future, you find that some of your holiday music is still in your Genius mixes, it's because the tracks haven't been properly tagged. I've downloaded a fair bit of holiday music, and some of it is tagged as Classical. Just tag these selections correctly, and they'll move into your smart playlist. Note that the album artwork for this music may still appear as part of a Genius mix, but the music won't.

Bugs & Fixes BY TED LANDAU

Troubleshoot iPad 3G Activation Most owners of a new iPad Wi-Fi + 3G have had no problems setting up and activating the 3G service option. *Most* people, however, is not the same as *all* people. If you have trouble getting 3G activated on your iPad, here are the most common problems and their solutions:

If there's no sign of cellular service, navigate to Settings ▸ General ▸ Reset and tap Reset Network Settings. This should establish 3G connectivity.

If, while setting up your cellular account or when first trying to make a 3G connection to the Internet, you get an error message that includes a Q5033 error code, it's likely that your newly created account isn't attached to any billing information. To remedy the situation, AT&T must delete your nonfunctioning account. You can then make a second attempt at activating the 3G service, which should now succeed.

Or if, while entering data for your activation, you get a message that reads "Please validate highlighted address information and retry," and the error persists no matter how many times you retype the data, your entered address (which is typically the same as your credit card billing address) may not, in AT&T's determination, have 3G coverage. AT&T has changed its procedure so that you can enter a different service area address. If even this option doesn't help, you may have to change your credit card billing address, at least temporarily, to one that AT&T finds acceptable.

A Bug Far, Far Away... If you have one of a subset of Mac models (mainly iMacs, Mac minis, or 13-inch MacBooks, all from 2006 to 2007) and you're running the latest Snow Leopard version (Mac OS X 10.6.3), iMovie '09 will crash if you scroll through iMovie's Titles pane to the point where the Far Far Away title appears.

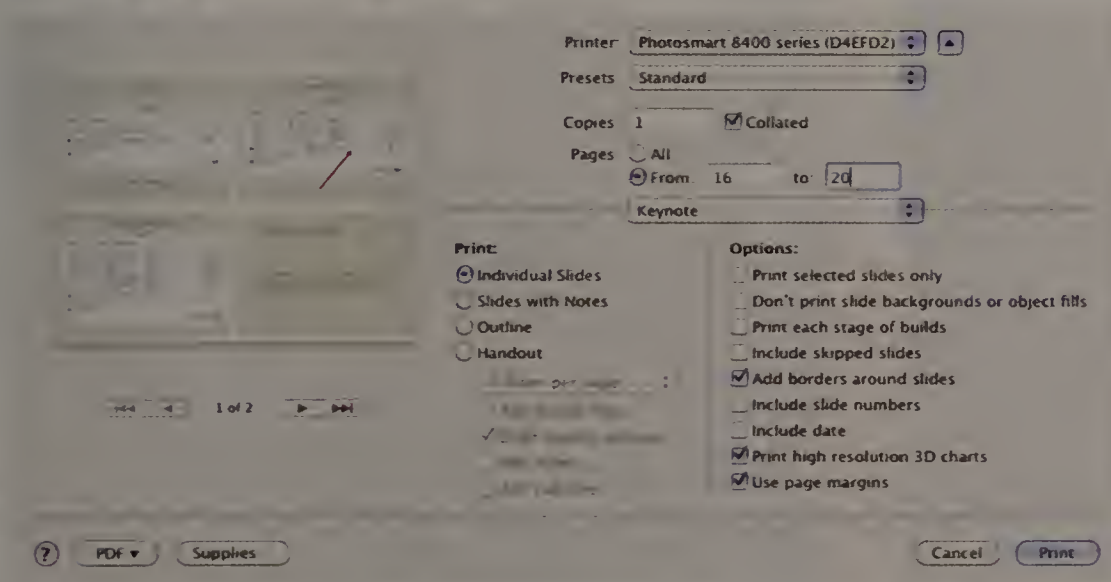
Apple offers two workarounds: (1) Downgrade to 10.6.2, or (2) "Avoid opening or scrolling the Titles pane in a way that reveals the Far Far Away title."

Senior Contributor **Ted Landau** is the founder of MacFixIt (www.macfixit.com). Share your problems at bugs@macworld.com or on Macworld.com's Mac 911 forum.

Print Keynote Handouts

Q: I've switched from PowerPoint to Keynote. When I printed PowerPoint handouts, I could put several slides on a page so that each slide took up one-quarter of the page. When I print Keynote handouts using the Handout option in the Print sheet, I get four small slides along the side of each page. How can I print Keynote handouts so they look like my old PowerPoint handouts?

Gary McDonald



Asking for Handouts Fiddle with the Print sheet settings to print presentation slides that will fill the page.

A: Choose File ▸ Print, and in the sheet that appears select Layout from the pop-up menu in the middle of the sheet. In the Pages Per Sheet pop-up menu, choose 4 (or the number of slides you want on each page). Click the pop-up menu that now reads Layout and choose Keynote. In the Print area of the resulting sheet, select Individual Slides rather than Handout (see "Asking for Handouts"). The preview to the left should display the neatly organized layout you're after.

ICONS BY PAUL HOWAL

Add a Network Printer

Q: I have an HP LaserJet 2100TN that formerly used AppleTalk to connect to my network. But since we upgraded to Snow Leopard, my iMac no longer sees the printer. How can I make the HP work with my iMac over a network?

Chris Rose

A: Try printing over IP. First, you must determine the IP address for your printer by forcing it to print a status page. The method for doing this varies by printer maker and model (you can usually find instructions in the printer's manual and online). In your case, briefly press the printer's Go and Job Cancel buttons. In a short while a couple of pages should emerge; on one of those pages is the printer's IP address in the form of a common internal network address—192.168.*something.something*, for example.

Now that you have the address, launch System Preferences, choose the Print & Fax preference, click the plus (+) button at the bottom of the Printers list, choose IP in the resulting Add A Printer window, and, in the Address field, enter the printer's IP address. If all goes as it should, your printer's name will appear in the Name field at the bottom of the window. Click the Add button, and your printer will be added and made available to you. You'll want to leave the printer on at all times to keep it from adopting a new IP address when you turn it off and then back on.

MAC 101

Configure the Default iCal Invitation Account

Q: I've repeatedly encountered a problem when sending iCal invitations to people: When I create an iCal event, add the invitees, and press Send, iCal sends the invitation from my MobileMe account instead of my work account. Is there a way I can define the mailbox that iCal uses to send the invitation, or must I copy and paste the invitation into a message in my work e-mail account?

Via the Internet

A: Here's how to fix the problem: Open Mail's Composing preference pane, and configure the Send New Message From pop-up menu so that it contains the address from which you want to send iCal events.

Add Free Text Services

Q: Under Leopard I had a service that allowed me to change the

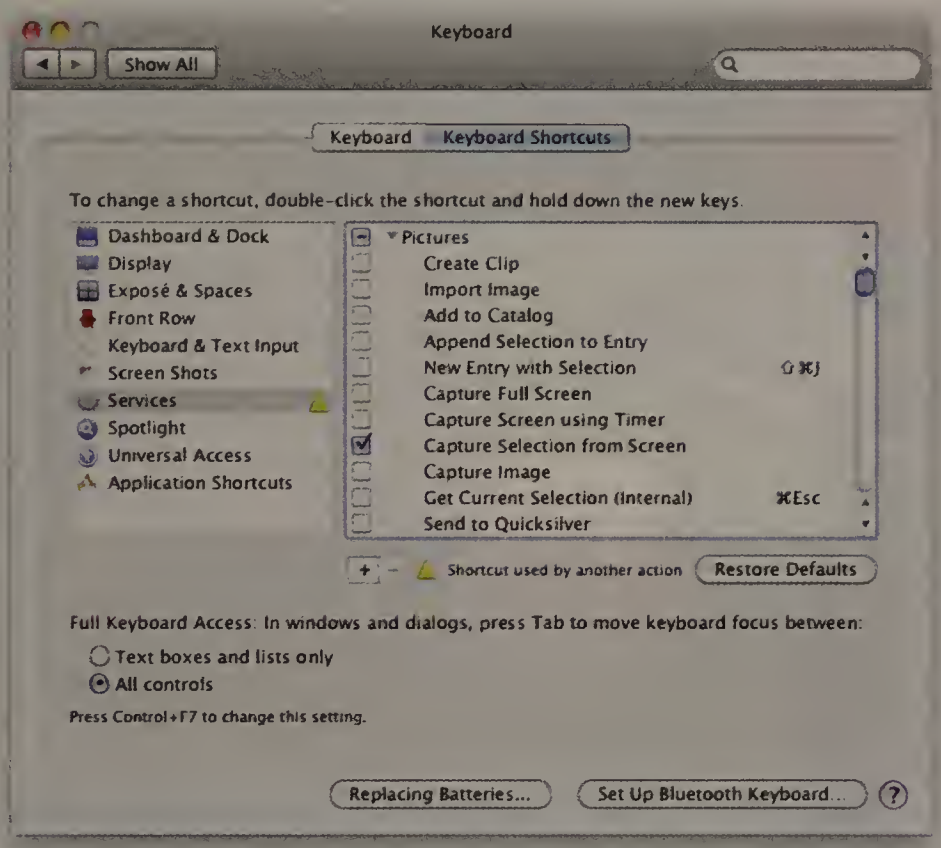
formatting of selected text (Small Caps, Sentence Case, Title Case, No Caps, All Caps). Unfortunately, it broke under Snow Leopard. Are you aware of any services for Snow Leopard that will give me back this functionality?

Mark Meyer

A: Devon Technologies offers the free WordService set of services (www.devon-technologies.com; for more on WordService, see this month's *Mac OS X Hints*, page 80). This set provides 34 helpful functions.

To make it work, create a Services folder within your user folder's Library folder (so, *youruserfolder*/Library/Services) and copy the WordService.service file into this folder. Log out of your account and then back in (and, no, the services won't be in evidence).

Launch System Preferences, select the Keyboard preference, click on the Keyboard Shortcuts tab, and select the Services entry on the left side of the window (or, to get there faster, select the Services command within any application and choose Services Preferences). In the right side of the window locate the Text heading. Below this heading you'll find the newly added services. To activate them, simply tick the checkbox next to the services you'd like to use (see "Enable Text Services").



Enable Text Services Switch on services within the Keyboard system preference.

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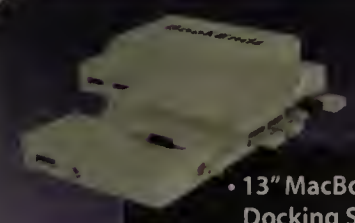

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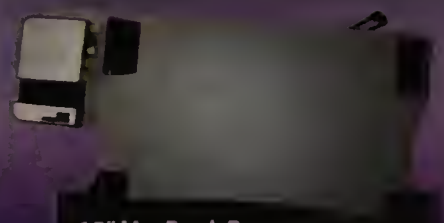

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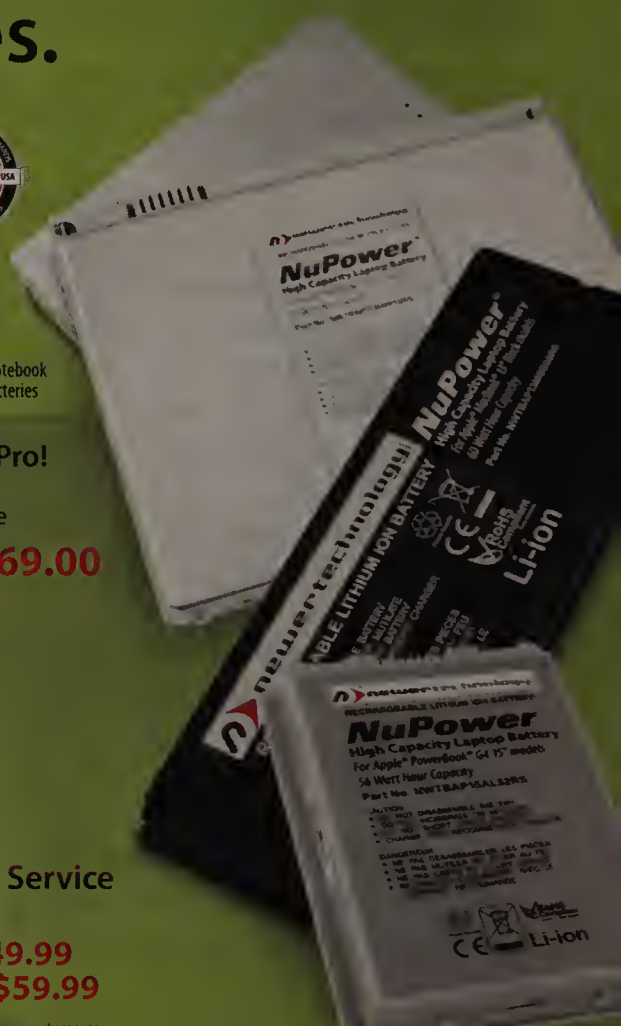

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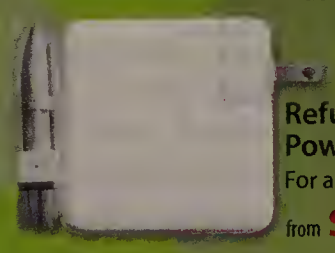

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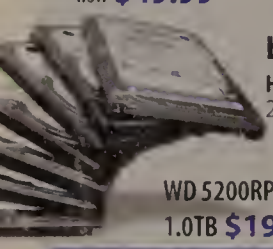

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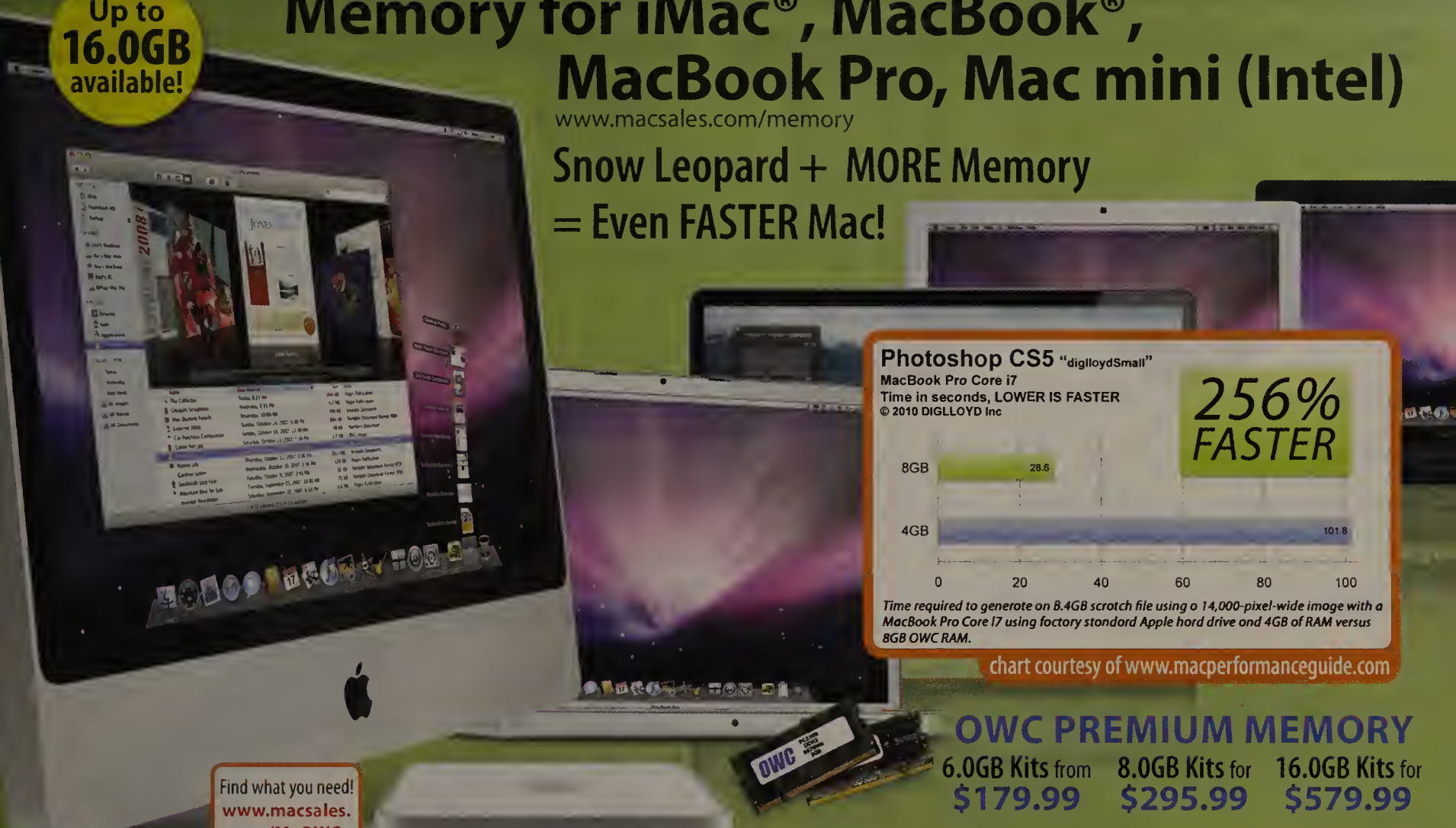

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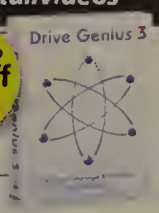

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Jeremy Horwitz
Editor-in-Chief, iLounge

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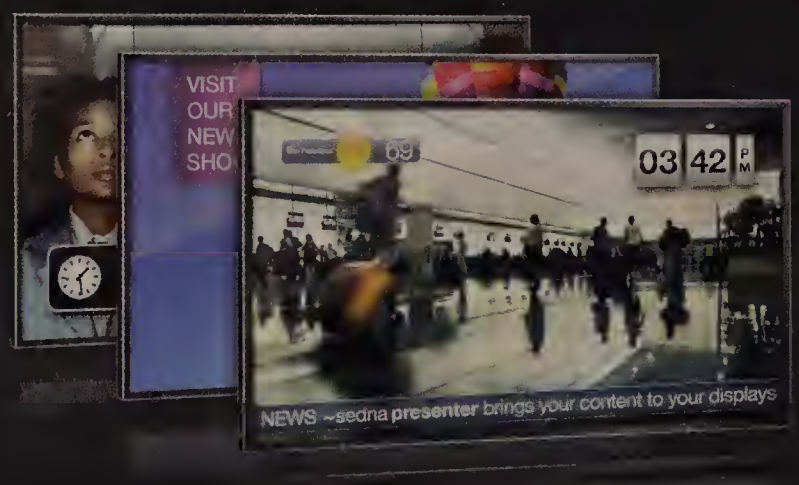

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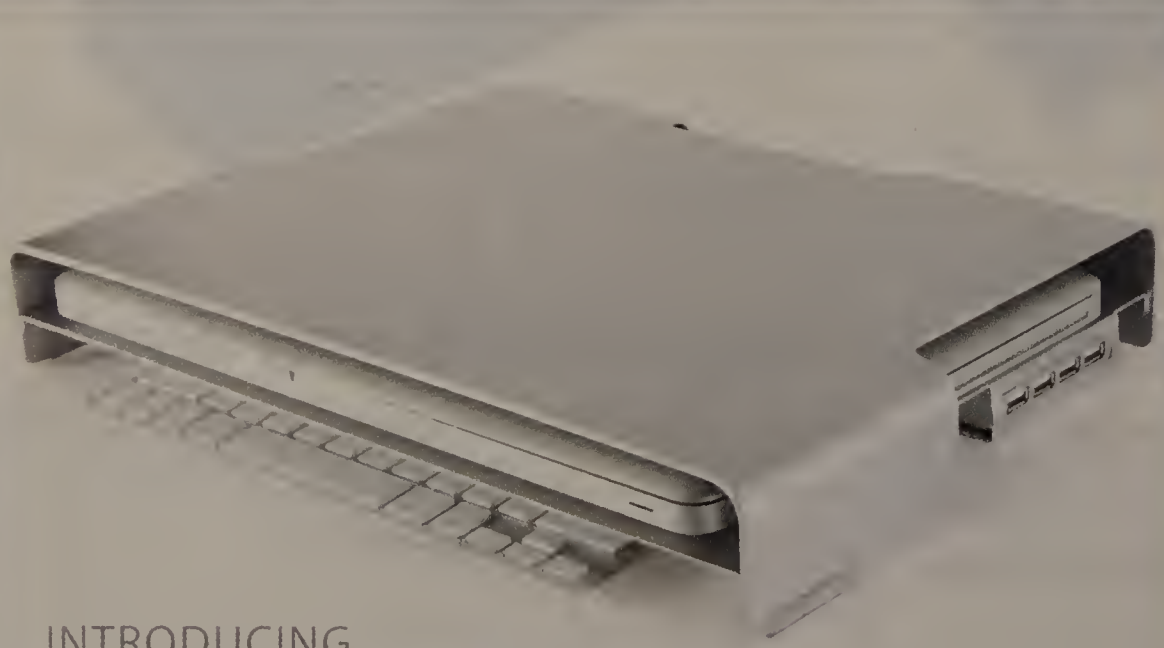

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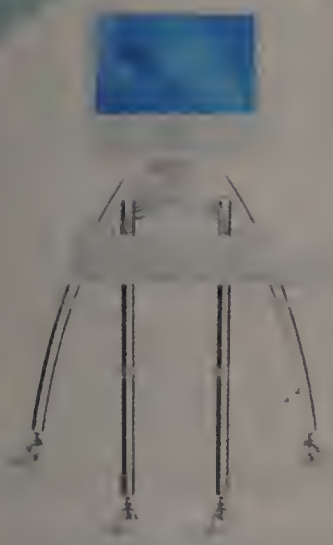

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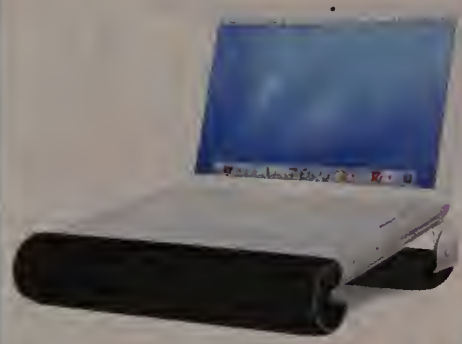

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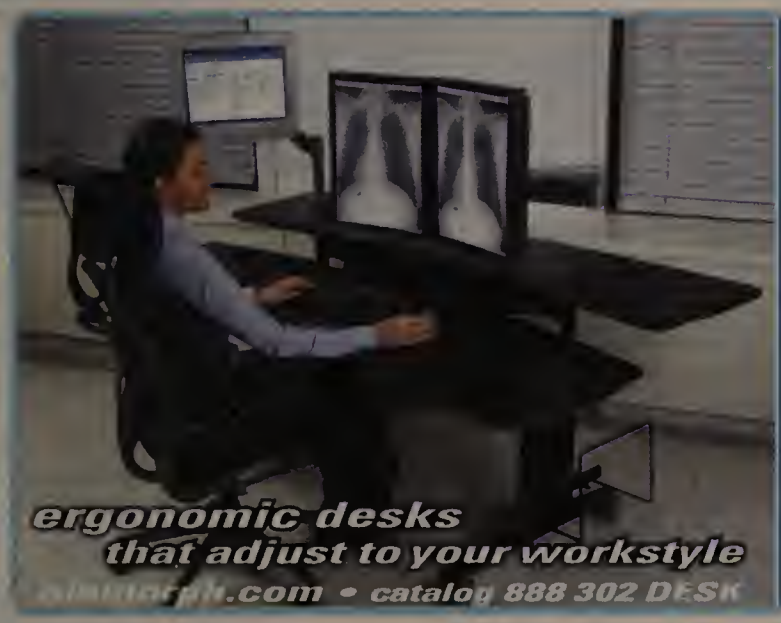

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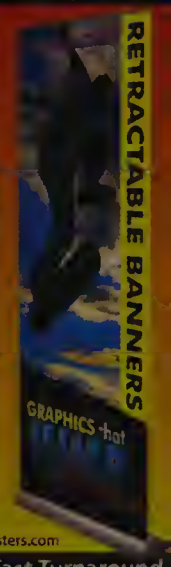

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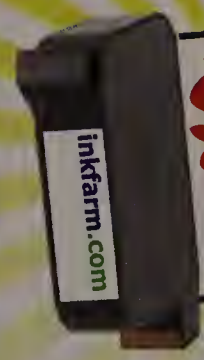

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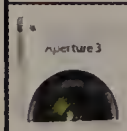

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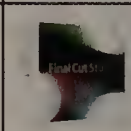

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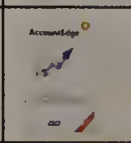

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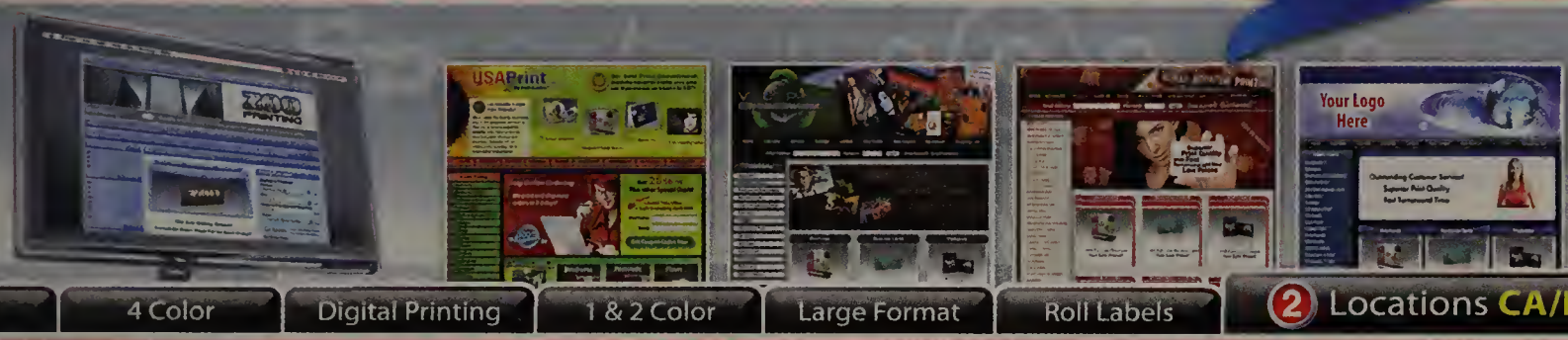

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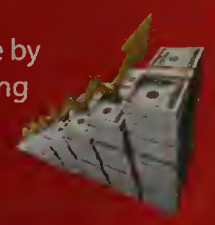

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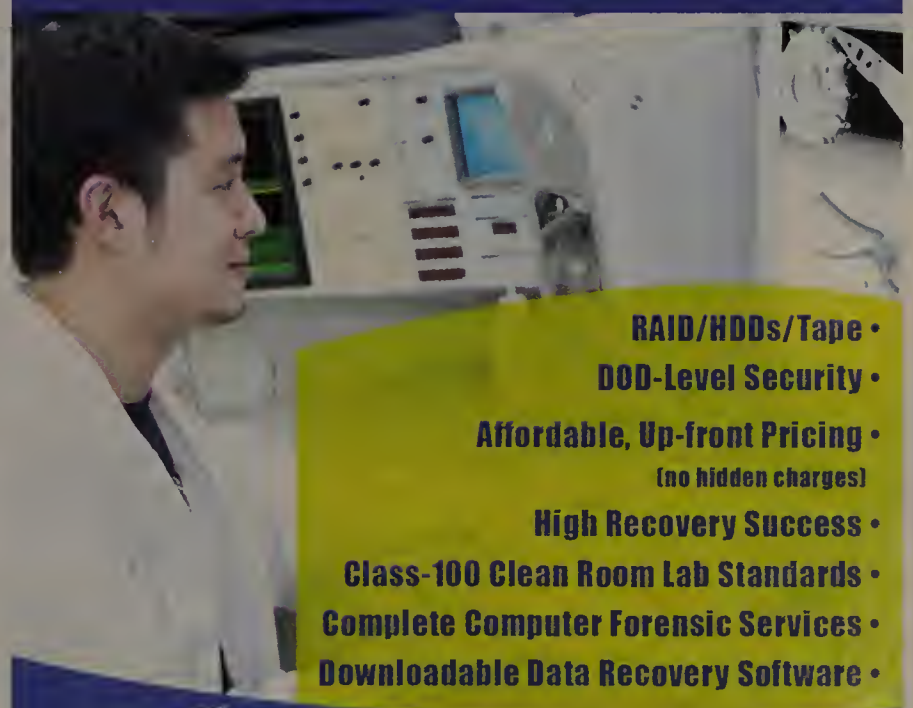

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SPOTLIGHT By Daniel Jalkut

Why I'm Sticking with the Mac

For this Mac developer, the desktop is still central

Three years ago, I had never even held a touchscreen computer. Today I carry one everywhere I go. Apple changed the mobile phone industry with the launch of the iPhone, and appears to be creating a similar sensation with the iPad. Now it's doing everything it can to keep that momentum going, showering us with ads on television and elsewhere, singing the praises of its latest handheld, touchscreen devices.

Let's face it: They *are* pretty great, aren't they? But as a longtime Mac developer, I have to admit that I'm disappointed by the diminished fanfare for my beloved desktop computer. For several years there, the Mac faithful were treated to a revival in Mac marketing. But lately, "Hello, I'm a Mac" has been replaced by "There's an app for that."

Some interpret the relative lack of Mac marketing as a death knell for the platform. But while the iPad is many great things, it's no Mac. Apple's touch platforms excite me as a programmer, and inspire me to think about software in all kinds of new ways. I'm spending a lot of time and energy targeting these new products. But I'm also still committed to the Mac.

Sky's the Limit

Apple's touch devices offer two clear advantages over the Mac: They are supremely portable, and they offer a delightful touch interface. The Mac can't compete with the tactile simplicity of picking up an iPad and pinching, swiping, and tapping a task to completion.

But the flip side of simplicity is limitation. Every constraint in the iPad's design prompts a chorus of "If only I could..." from crestfallen users. Customizable hardware, integration among apps, processing power, and, yes, complexity are among the Mac's strengths. Will the iPad ever catch up? Perhaps. Given many years and countless product iterations, it could happen. But in the meantime, there's a Mac for that.

Customers seem to recognize this. Even as the iPhone and the iPad have captivated the public, Mac sales have continued to set new records. There have never been more Mac users than there are today, and Apple keeps attracting more. Unless those customers feel that the Mac is perfect just the way it is—with Apple's built-in software and nothing else—then each one of them is a potential customer for me.

Running My Own Show

One of the chief attractions of the iPhone and the iPad is the App Store. The store has one advantage for developers: Apple takes care of the nuts and bolts of the operation, leaving developers free to focus on developing software.

Apple's touch platforms excite me as a programmer. But I'm also still committed to the Mac.

But because Apple runs every aspect of the store, and because it is not afraid to flex its muscle, many of the freedoms I enjoy in my Mac software business are forbidden in the App Store. I can't offer trial downloads of my software; release an update immediately or without Apple's approval; collect contact information from my customers; offer discount coupons, freebies, or bundle deals; or take advantage of innovative, third-party developer technologies.

In short, I must cede every decision about my business—be it technical, aesthetic, or entrepreneurial—in part or wholly to Apple. Keeping a strong foothold on the Mac is one way I can make sure that, for one of Apple's platforms at least, the buck still stops with me.

Reading Apple's Playbook

Apple pushes the Mac as a digital hub for electronic devices. Every product it sells—from the AirPort Express to the iPad—promises to work even better if you have a Mac. I'm adopting the same strategy: build unique solutions to suit the strengths of each product, and use the Mac as the digital hub that seamlessly pulls them together.

Apple's strength on the desktop permits it to take risks with other products, leveraging the technologies of previous successes to build completely new things. The fact that touchscreen computers are now ubiquitous owes as much to Apple's relentless, Mac-centered product strategy as it does to the specific genius of the iPhone or the iPad. A high-powered, general-purpose desktop computer is at the core of Apple's winning strategy. For the foreseeable future, I think that core will continue to be the Mac.

Daniel Jalkut is the founder of Red Sweater Software (www.red-sweater.com), maker of MarsEdit, Black Ink, and other Mac apps.

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